

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 671.—Vol. XVIII.

LONDON, SATURDAY, JULY 1, 1848.

[PRICE 6D.]

HERODSCOOMB MINE.—FOR SALE, BY PRIVATE CONTRACT, HERODSCOOMB MINE MATERIALS, either together or in separate lots, consisting of—

- | | |
|--|------------------------------------|
| 1 9-foot 7-inch pumps. | 1 Balance-bob |
| 1 6-foot 6-inch working barrel | 1 Shaft-bob |
| 1 6-foot 6-inch doorplace | 1 Traveller-bob |
| 1 9-foot 6-inch windrope | 1 Horizontal wood sweep-rod |
| 1 Horse-whim | 30 Fathoms 2-inch square iron-rods |
| 2 4-foot whim-shieves | 1 Winze kibble |
| 2 Horse kiddles | 1 Large stool—and |
| 1 16-inch cylinder DIRECT DOUBLE-ACTING ROTARY STEAM-ENGINE and BOILER, complete, with pumping and drawing apparatus attached. | |

This engine is in excellent condition—was erected new, about 18 months since, and the rotary and pumping apparatus about nine months, from the drawings, and under the superintendence of Messrs. Hocking and Loom, engineers; and, for cheapness of construction, efficiency, and economy, has given the most entire satisfaction.

Parties in want of an engine to sink 40 or 50 fathoms for trial, will find this one well adapted for that purpose; and should the trial prove satisfactory, and a larger pumping-engine be required, this can be applied wholly to drawing and crushing, with no expense, as her construction will admit of her being first placed in a proper position, at a distance from the shaft.

All particulars may be had of Mr. Matthew Loom, engineer, Liskeard, to whom all tenders, stating the highest price, must be addressed.

EXTENSIVE IRON-WORKS FOR SALE. (UPSET PRICE REDUCED).

TO BE SOLD, BY PUBLIC AUCTION, within the Royal Exchange Sale Rooms, Glasgow, upon Wednesday, the 13th day of July next, at Two o'clock in the afternoon (if not previously disposed of by private bargain).

THE BLAIR IRON-WORKS.
Belonging to the Ayrshire Iron Co., situated in the parish of DALRY and county of Ayr, together with the adjoining valuable MINERAL FIELDS of IRONSTONE, COAL, LIMESTONE, FIRE-CLAY, &c., held by the company under favourable leases. The works, which have been recently erected at an immense cost, consist of two blowing engines, five blast-furnaces, workmen's houses, steam-engines for working the minerals, together with utensils at the pits, furnaces, &c., all in working order.

Also, the MALLEABLE IRON-WORKS, so far as erected—all as particularly described in former advertisements.

For further particulars, apply to Mr. Brown, at the company's office, 113, St. Vincent-street, Glasgow; Messrs. McClelland and McKennie, accountants, Glasgow; Messrs. Montgomery and Fleming, writers there; or to Messrs. Gibson-Craig, Dalziel, and Brodie, W.S., Edinburgh.

N.B.—The purchaser of these works has an opportunity of, at the same time, acquiring the Mansion-house, Lands, and Minerals of Pitcon, immediately adjoining (the latter being part of those above referred to, as held in lease by the company), which are advertised to be sold at the same time and place.—Glasgow, June 12, 1848.

VALUABLE ESTATE AND MINERAL FIELD, IN Ayrshire, FOR SALE.

TO BE SOLD, BY PUBLIC AUCTION, within the Royal Exchange Sale Rooms, Queen-street, Glasgow, upon Wednesday, the 13th day of July next, at Two o'clock in the afternoon (unless previously disposed of by private bargain).

ALL and WHOLE the LANDS and ESTATE of PITCON, extending to about 216 acres, Imperial measure, as described in former advertisements, with the MANSION HOUSE OF PITCON, and OFFICES and GARDEN, &c., thereto belonging; and the whole MINERALS and METALS in the said estate excepting these eight acres, or thereby. Scotch measure, now belonging to the Glasgow Iron Company, of their presently working seam of ironstone in the said lands of Pitcon; and also, excepting the Pitcon Railway and branches, in so far as the same are within, and pass through, the said lands.

The MANSION-HOUSE and OFFICES are in good repair, and the garden, shrubbery, and pleasure grounds, are in excellent order, and the whole are inclosed from the other portions of the estate, by a substantially built wall.

The LANDS let under lease (exclusive of those attached to the mansion-house), are held by a respectable tenant, at a surface rent of 450*l*. These lands extend to about 140 acres Scotch, or thereby, and the farm standing upon them is substantially built.

The MINERALS comprise the most valuable description of ironstone, extend to about 140 acres, still unworked, and are at present leased to the Ayrshire Iron Company, at a fixed rent of 10,000 sterling per annum, or at a certain lordship, in the option of the landlord. Upon a moderate calculation, the black-band yields about 3000 tons calcined ironstone to the Imperial acre. There are several seams of coal and other minerals in the course of being wrought in the lands.

The public and parish burdens are small. This property is in the immediate neighbourhood of the railway, and is well adapted for the Ayrshire Iron Company, who are advertised to be sold at the same time and place with the mineral lease of Pitcon.

For further particulars, application may be made to McClelland and McKennie, accountants, 128, Ingram-street, Glasgow; Robert McCowan, accountant, 17, Gordon-street, there; Knox and Findlay, writers, 29, St. Vincent-place, there; James McCosh, writer in Dalry; or to Douglas and Ranken, writers, 81, St. George's place, Glasgow, in whose hands the articles of roup and title-deeds, and a plan of the estate, and mineral workings, may be seen.

Mr. McCosh will give directions for the lands being pointed out, and the mansion house, offices, and garden being shown to inquirers. BOGLE and Co., Auctioneers. Glasgow, June 19, 1848.

TO IRONMASTERS AND MANUFACTURERS OF STEAM-ENGINES, BOILERS, CASTINGS, RAILS, BAR-IRON, &c.

MILTON IRON-WORKS.—TO BE LET, for a term of 21 years, may be entered upon the 1st of October next, all those old-established IRON-WORKS, called

THE MILTON IRON-WORKS.

Situate near to the ELSECAR COAL-FIELD, and the TANKERSLEY PARK IRON-STONE GROUNDS, and at a convenient distance from the manufacturing towns of Sheffield, Rotherham, and Barnsley, in the county of YORK. The works consist of TWO BLAST-FURNACES, with every requisite appendage.

FORGE and MILL, with puddling and other furnaces, chafery for drawing uses, rolling and slitting-mills, &c., capable of manufacturing from 90 to 100 tons of finished iron per week.

FOUNDRY, with pits, drying-stoves, and every requisite apparatus for making engine work and castings, of every description, to the extent of 100 tons per week.

ENGINE-FITTING SHOPS, with lathes, boring and planing machines, boiler-makers' and smiths' shops, and every requisite for carrying on engine and railway work to a large extent. Together with an ample supply

ELSECAR COALS and TANKERSLEY PARK and SWALLOW-WOOD IRONSTONE, on terms to be agreed upon.

The works possess, at present, excellent canal and river communication, and will shortly have the advantage of the South Yorkshire Railway.

N.B.—Although the owner of the works would not absolutely restrain the lessees from making and manufacturing hot-blast iron, yet he would prefer treating with parties who would undertake to make and manufacture cold-blast iron only.

For further particulars apply to Mr. Newman, of Darley Hall, near Barnsley; or Mr. Woodhouse, of Overcraze, near Ashby-de-la-Zouch.

Darley Hall, near Barnsley, June 15, 1848.

EXTENSIVE AND VALUABLE MINERAL PROPERTY AND IRON-WORKS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, THE VENALL COAL AND IRON-WORKS.

Situate on the south side of the RIVER NEATH, GLAMORGANSHIRE, about 8 miles from the port of Neath, and 14 from the port of Swansea, with all the necessary appendages for carrying on the smelting of iron, and an extensive shipping trade of stone coal and stone culm.

The property comprises long leases of coal and ironstone, extending over about 1000 acres of land, in a ring fence, which are taken on favourable terms. The coal is anthracite, and three veins of an aggregate thickness of about 25 feet, are effectively opened by level, for the supply of 100 to 200 tons per day.

The ironstone veins are abundant and rich, and sufficiently opened by level to yield an ample supply for three furnaces. There is also valuable black-band extending over a large acreage.

The works consist of an engine-house for a pair of engines, one 50-horse high-pressure blowing-engine, two blast-furnaces, with all the necessary hot-blast stoves, castings-houses, foundry, finery, &c.

The works and colliery are in operation, and any persons who may be desirous of purchasing, will be treated with on liberal terms.

Reports recently made on the property, by Messrs. John Southern, of Bilston, and W. P. Struvé, of Swansea, may be seen on application to Messrs. Jevons and Wood, Neath; Messrs. Llewellyn and Randall, solicitors, Neath; or to Messrs. Rowland, Hacon, and Rowland, solicitors, 38, Threadneedle-street, London.

For further particulars apply to Thomas Wheldon, Esq., Barnard Castle; or to Nicholas Wood, Esq., Newcastle-upon-Tyne.—Newcastle, March 3, 1848.

VALUABLE SEA-SALE COLLIERIES TO BE LET.—TO BE LET, and entered upon on the 1st of July next, the valuable current-working COLLIERIES of EVENWOOD and NORWOOD, in the county of Durham.

These collieries are situated upon the line of the Stockton and Darlington Railway, by which the coals are conveyed to the shipping ports of Stockton and Middlesbrough; and also, by means of this, and the York and Newcastle, and Leeds and Thirsk Railways, the coals have access to the important land-sale trade of Northallerton, Thirsk, Ripon, York, the lead-mining districts, and other towns in Yorkshire, and for shipment on the Ouse, and, by means of the proposed Northern Counties Union Railway, with the important land-sale trade of the western parts of Yorkshire and Westmoreland.

The royalties are very extensive. Two seams of coal are in working—one upwards of 6 feet, and the other of 3 feet. The pits are at a moderate depth from the surface, and the coal is worked at an exceedingly cheap rate, and is much prized as a household coal, both for export and land-sale.

The entering tenant has the option of taking what stock he may require, at a valuation; and the amount of capital required to enter upon the collieries will be of very small amount.

For particulars apply to Thomas Wheldon, Esq., Barnard Castle; or to Nicholas Wood, Esq., Newcastle-upon-Tyne.—Newcastle, March 3, 1848.

TO BE SOLD, OR LET, a valuable COAL MINE, in the township of GREAT HARWOOD, in the county of Lancaster.

The mine has been recently proved, and found to be 3 feet 2 inches in thickness, and of excellent quality; it is commonly called, or known, by the name of the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots.

The property is situated between the towns of Blackburn and Clith-rope, and is intersected by a branch of the East Lancashire Railway.

A section of the borings may be seen, by applying to Mr. Boole, Rufford-hall, Ormskirk; or to Mr. Whittle, coal-viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

IMPORTANT TO CAPITALISTS.—TO BE SOLD, an excellent SLATE and SLAB QUARRY—VARIEGATED MARBLE and HONE QUARRY—COPPER and LEAD MINES—all situated on the same property, within a short distance of the shipping harbour of Portsmouth, Cornwallshire.

A GENERAL STATEMENT.

The above works are situated on a farm called Crossaw-uchaf, in the parish of Llanfrothen, in the county of Merioneth, about seven miles distant from the shipping harbour of Portsmouth, and about two and a half from the railway of the Festiniog Slate Quarries to the port. They are near the celebrated quarries of Festiniog, which are well known throughout Europe; and it hath been ascertained, by competent judges, that this slate vein is a continuation of the very productive vein worked by the Welsh Slate Company at that place, of which Lord Palmerston and other noblemen are partners, which send about 500 tons per week of fine slate to the market. The vein is about 70 yards wide, and very advantageous for working, being situated on the brow of a hill, and the rubbish thrown down, where there is a depositary of 200 or 300 yards deep for it, without causing any trespass. The quality is good, splits well, and is of a beautiful blue colour.

Slates of the largest size are made from it, and slabs also, of large dimensions. Thousands of fine slates, worked to sizes, and beautiful slabs, are now ready on the bank.

The proprietor has ascertained most positively that no other slate quarries in Wales can produce such beautiful specimens from so near the surface, and where so little money has been expended.

The MARBLE and HONE quarries, and some splendid specimens of variegated marble and hone have been already made from it.

The COPPER and LEAD MINES are about a quarter of a mile from the slate quarry, and the metals are of superior quality, and likely to become very productive.

There is the greatest facility for carrying on operations at all the works, which may be done with little expense, as few or no machinery will be required. A sawing and planing engine may be worked by water, just below the quarry.

Satisfactory reasons will be given why it is sold.

For further particulars, and to treat for the same, apply (postage paid) to Mr. Richard Jones, printer and auctioneer, Dolgelly, North Wales, where specimens of the slates, marble, hone, copper, and lead, may be seen.

CORNWALL NEW MINING COMPANY.

Capital £100,000, divided into 20,000 shares, of 5*l* each.

Incorporated in pursuance of the Statute of 7 and 8 Victoria, cap. 110.

BANKERS—London and County Bank, 21, Lombard-street.

The directors beg to announce, that they are NOW ALLOTING the SHARES in the above company; and, from the number already disposed of, they request parties desiring to take shares to make early application. Those to whom allotments have been made, are requested to pay their deposits into the bankers of the company, as above.

Office, 17, Essex-street, Strand. GEORGE LOCKWOOD, Secretary.

LONDONDERRY MINING COMPANY OF NOVA SCOTIA.—Capital, £20,000, in 2000 shares, of 10*l* each.

It is provided that 21 days' Notice be given of each call, and that no call exceed 20 per cent, and that successive calls be not made at less than six months, and that the aggregate amount of calls, made in any one year, do not exceed 40 per cent.

Incorporated by Act of the Provincial Parliament.

The following directors have been named in the Act (together with other persons) as constituting the corporation; and they are to continue in office until superseded, or confirmed, by a vote of the London shareholders—viz.:

The Hon. W. A. BLACK, } Members of the Legislative Council.
The Hon. J. E. FAIRBANKS, }
The Hon. ALEX. KEITH, }

J. W. JOHNSTON, Esq., Advocate-General.

This company has been formed for the purpose of WORKING a MINE, recently discovered, of IRON ORE of superior quality and richness, situated in the province of Nova Scotia, about 70 miles from Halifax, and about seven miles from a good shipping port, in the Bay of Fundy.

This extraordinary deposit of specular iron ore has been surveyed by Dr. Gesner and J. W. Dawson, Esq., provincial geologists. Extracts from their reports are appended to the prospectus, and other unquestionable references.

"To John Ross, Esq., of Truro, Nova Scotia.

"DEAR SIR,—It gives me great pleasure, in reply to your request, to express the high opinion I entertain of the mine, its requirements, and high qualifications of Mr. J. W. Dawson, of Pictou, as a mineral surveyor and geologist, of which I had an opportunity of judging during an examination, which we made together, of several parts of Nova Scotia, and, among others, the district of the Folley river—to the valuable ores of which you are now directing public attention.

I may further add, that Mr. Dawson's name is now well-known to the Geological Society of London by several Memoirs on the Geology of Nova Scotia, accompanied by maps and sections, published in the *Proceedings and Quarterly Journal*.

"I have the honour to be, dear Sir, yours, &c."

"11, Harley-street, May 2, 1848." (Signed) "CHARLES LYELL.

Application for shares will be received by Mr. Charles Walton, of the firm of Charles Walton and Sons, Newman's-court, 73, Cornhill.

One-third of the capital stock of the company is reserved for the colonial shareholders—the remaining 1333 shares are offered to capitalists in London, until the 30th inst.

Printed forms of application may be obtained with the prospectus, where the Act may be seen.—Prospectuses may be obtained, and specimens of the ore seen, by applying to Messrs. Royston and Brown, 40, Old Broad-street; Messrs. Charles Watson and Sons, 73, Cornhill; or on application to Mr. Henry English, 25, Fleet-street.—Prospectuses can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

WHEEL CURTIS COPPER MINING COMPANY.—Notice

is hereby given, that a GENERAL MEETING of shareholders of the WHEEL CURTIS COPPER MINING COMPANY will be held at the Guildhall Coffee-house, King-street, Cheshire, in the city of London, on Wednesday, the 5th day of July next, at Twelve o'clock at noon precisely, to receive from the board of directors the half-yearly statement of the accounts and affairs of the company, and for the purpose of ratifying and confirming a certain resolution or declaration made by the board of directors of the said company on the 1st day of April last, whereby they declared that the several shares of, and in the said company, hereinafter mentioned (that is to say), 25 shares numbered respectively 423 to 447 inclusive, 10 shares numbered respectively 468 to 477 inclusive, were respectively forfeited for the non-payment of the said calls on the said shares respectively, and interest as therein mentioned; and also for the purpose of ratifying and confirming a certain resolution or declaration made by the board of directors of the said company on the 13th day of May last, whereby they declared that the several shares of, and in the said company, hereinafter mentioned (that is to say), 500 shares numbered 1531 to 2030 inclusive, 20 shares numbered 2031 to 2050 inclusive, 5 shares numbered 2056 to 2090 inclusive, 10 shares numbered 2091 to 2100 inclusive, 10 shares numbered 2101 to 2110 inclusive, 10 shares numbered 2111 to 2120 inclusive, 10 shares numbered 2121 to 2130 inclusive, 50 shares numbered 2131 to 2180 inclusive, 100 shares numbered 2231 to 2330 inclusive, and 300 shares numbered 2331 to 2630 inclusive, were respectively forfeited for the non-payment of the second instalment of 10*l*. on a call of 1*l* per share, and interest thereon as therein mentioned; and also for the purpose of ratifying and confirming a certain resolution or declaration by the said board of directors, made on the said 13th day of May last, whereby they declared the several shares of, and in the said company, hereinafter mentioned (that is to say), 80 shares numbered respectively 1106 to 1187 inclusive, and 25 shares numbered respectively 3595 to 3619 inclusive, were forfeited for the non-payment of a call of 1*l* per share on the said last-mentioned 80 shares, and 25 shares, and interest as therein mentioned, and on other affairs.—Dated this 10th day of June, 1848.

Basinghall-chambers, Basinghall-street. GEORGE A. JACOB, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to

inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY.

23, HAWLEY-ROAD, KENTISH TOWN, LONDON.

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

VENTILATION OF COAL MINES.—BIRAM'S PATENT

ANEMOMETER.—THIS INSTRUMENT has now been SUCCESSFULLY EMPLOYED by many eminent engineers, to whom reference can be given.

For particulars, apply either to the inventor, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, Derby, manufacturer of miners' dials, clinometers, safety-lamps, and all kinds of instruments pertaining to the engineer, as made and kept in stock.—Repairs promptly attended to.

J. DAVIS, Irongate, Derby.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.

—This article affords the SAFEST, CHEAPEST, and most EXPEDIENT MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Cambridge, Cornwall.

MINING.—TO MINING PROPRIETORS, COMPANIES, MINING SHAREHOLDERS, and MINE AGENTS.

EVAN HOPKINS, C.E., F.G.S.

Soliciting his opinion and advice on the prospects of any given mine (the essential particulars being furnished), or to inspect and survey any mining property, are to be sent (for the present), to the care of the Editor of the *Mining Journal* (post-paid), 26, Fleet-street, London, who will forward the same, and which will be duly and confidentially attended to without delay.

TO MINING COMPANIES interested in, and PARTIES desirous of becoming PURCHASERS of, MINERAL LANDS, in SOUTH AUSTRALIA.

The ADVERTISER, a civil engineer, who has lately returned from the colony, and has had considerable experience in mining operations there, and is well acquainted with that vast mineral district, now OFFERS his SERVICES to any company who may be about sending out a RESIDENT SUPERINTENDENT, or to any party who may be about purchasing mineral land there. Satisfactory references will be given. Address "T. M. E.," at the office of the *Mining Journal*, 26, Fleet-street, London.

TO COPPER MINERS AND OTHERS.—WANTED, by a

Birmingham merchant, well connected with the manufacturers, a COMMISSION to SELL COPPER and OTHER METALS.—Apply, by letter only, 766, Midland Counties Herald Office, Birmingham.

TO MINING COMPANIES and CAPITALISTS.—The

ADVERTISER, who is about taking out a PATENT for IMPROVEMENTS in WIND-PUMPS, and an INVENTION for the PRESERVATION of COMMON WIND-MILL SAILS, wishes to SELL PART of his INTEREST in the same.—Apply to Mr. C. Mayes, civil engineer, Leek, Staffordshire.

TO IRONMASTERS.—WANTED, by an experienced

PRACTICAL PERSON, a SITUATION, as MANAGER or SUPERINTENDENT of BLAST-FURNACES, &c. Can give unexceptionable references to some of the first ironmasters in the trade, as to ability, integrity, sobriety, &c., if required.—Address (post-paid) "N. N.," Post-office, Wolverhampton.

TO IRONFOUNDERS, &c.—Notice is hereby given, that the

directors of the WARRINGTON GAS-LIGHT and COKE COMPANY are prepared to RECEIVE TENDERS for the ERECTION of a CONDENSER, at their WORKS, in WARRINGTON.—Plans and specification may be seen on application to the manager. Persons desirous of making a tender will be allowed to inspect a condenser of nearly similar construction, and may receive further information, by applying to Mr. King, at the Gas-Works, Dale-street, Liverpool.

Tenders, under seal, addressed to the directors, and marked "Tender for Condenser," to be sent, under cover, to the manager.

The directors do not pledge themselves to accept the lowest tender. Warrington Gas-Works, June 23, 1848. C. SMITH, Manager.

TWO NEW STEAM-BOILERS—one 20 and one 30-horse

power—FOR SALE, at one-third of cost-price, and must be cleared off the premises in a fortnight, is the cause of reduced price.—Apply to Mr. Connor, 13, Elder-street, Norton Folgate.

STEAM-ENGINE.—WANTED to PURCHASE, for a mine

in Cornwall, an ENGINE, about 40-horse cylinder, in good working order.—Address "A. B.," 13, Oxford-street, London, stating the lowest price for cash.

STEAM-ENGINE FOR SALE.—A 30-horse power, high-

pressure, horizontal, STEAM-ENGINE, with BOILER, &c. (quite new); also, a PAIR of STRONG WHEELS, with SHAFT, BEARINGS, and CRANKS, suitable for pumping.—Apply to Mr. Chas. Wharton, engineer, Mount-street, Nottingham.

PUMPS.—ON SALE, at Mr. C. JACK'S, Nos. 8 and 9,

TOTTENHAM-COURT, NEW ROAD, to raise 100 gallons of water per minute; by one man, 8 to 9 ft. 6 in. high, 35 gallons per minute; by one man, 20 to 35 feet high, 70 gallons per minute; by 1-horse steam-power, 32 to 42 feet high, and other sizes.

Patented Office—No. 2, MOORGATE-STREET, CITY.

MINING SHARE OFFICE.—W. BAWDEN, of No. 2,

BANK CHAMBERS, LONDON, MINE AGENT, of 21 years' standing, begs to call the attention of PURCHASERS of MINING PROPERTY to the following SHARES at this particular time—viz.: United Mexican, Bolanos, Del Rey, and Tamara, as there is, from present appearances, every rational prospect for purchasers realising from 50 to 200 per cent, in a few months, on their outlay.—W. B. will be most happy to give every information respecting these and other mining shares.

Attendance daily from Ten to Four o'clock.

MINING OFFICES.—ESTABLISHED FIVE YEARS.—

THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Phillips and Tiplady's).

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MR. R. TREDINNICK, THREE KING'S COURT,

LOMBARD-STREET, LONDON.

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

MR. JAMES STRIDE, MINING, SHARE, ESTATE,

PARLIAMENTARY, and GENERAL AGENT, begs to announce, that he has REMOVED, from 35, Charing-cross, to 27, SPRING-GARDENS.

Mines Inspected and Reported on.

JAMES LANE, MINING SHARE DEALER

75, OLD BROAD-STREET, LONDON.

REUBEN FARLEY, MINE AGENT, AND LAND AND

MINE SURVEYOR, WEST BROMWICH, NEAR BIRMINGHAM.

AGENT to the NORTH OF ENGLAND FIRE and LIFE INSURANCE COMPANIES.

WILLIAM W. TAYLOR & CO., MINERAL SURVEYORS

MINING SHAREBROKERS, &c., No. 3, ROYAL EXCHANGE-BUILDINGS, LONDON.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS,

LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE

PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MONEY.—MESSRS. KILLICK & CO. (late WINSTANLEY,

KILLICK & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, in any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms; they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.

6, Bank Chambers, opposite the Bank of England.

CALLINGTON MINES COMPANY.—At a Quarterly Special

General Meeting of the shareholders in this company, held this day, the following resolutions were passed:—

Resolved.—That the reports and accounts, now submitted, be received, adopted, and entered in the cost and transfer book.—Carried unanimously.

Resolved.—That the best thanks of this meeting be presented to the chairman and directors, for their attention and devotion to the interests of the company.—Carried unanimously.—44, Finsbury-square, June 28, 1848.

LAMHEROEE WHEEL MARIA MINING COMPANY,

Office

GREATEST ASCERTAINED DEPTH OF THE OCEAN.—On the 2d of June, when in latitude 16° 3' south, and longitude 20° 4' west, being nearly calm, and the water quite smooth (says Sir J. C. Ross), we tried for, but did not obtain, soundings with 400 fms. of line, or 27,000 feet (very nearly 54 miles). This is the greatest depth of the ocean that has yet been satisfactorily ascertained, but we have reason to believe that there are many parts of it where it is still deeper. Determination is a desideratum in terrestrial physics of great interest and importance.—*Voyage to the Southern Seas.*

PATENT IMPROVEMENTS IN CHRONOMETERS.
WATCHES, AND CLOCKS.—E. J. DENT, 52, Strand, and 33, Cockspur-street, watch and clock maker, by APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gu. each; in gold cases, from £8 to £10 extra. Gold horizontal wall chimes, with gold dials, from 8 gu. to 12 gu. each. DENT'S PATENT DILATEDSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use, 1s. each, but to customers gratis.

PROFESSIONAL LIFE ASSURANCE COMPANY.
Connecting the Clerical, Legal, Military, Naval, and Medical professions, and holding out advantages to the public not hitherto offered by any similar institution. Incorporated.—Capital £250,000.

Established upon the mixed, mutual, and proprietary principle.
Rates essentially moderate.—Every description of policy granted. Immediate, survivorship, and deferred annuities; and endowments to widows, children, and others.—Every policy (except only in cases of personal annuities)—The assured permitted to go to and reside in Canada, Nova Scotia, New Brunswick, Australia, Madeira, Cape of Good Hope, and Prince Edward's Island, without additional premium.—Medical men remunerated for their reports.—Loans granted on real or personal security.—One-tenth of the entire profits appropriated for the relief of the assured while living, and of his widow or orphan.—Annuities granted in the event of blindness, insanity, paralysis, accidents, and any other bodily or mental affliction, disabling the parties.—Persons of every class and degree admitted to all the advantages of the corporation.—Rates for assuring £100 at the age of 25, 35, 45, and 55, respectively—namely, £1 14s. 6d., £2 5s. 6d., £3 4s. 3d., and £4 18s. 6d.

Prospectuses, with full details, may be had at the office.—Applications requested from parties desirous of becoming members. EDWARD BAYLIS, Actuary and Secretary. Office, 76, Cheapside, London.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY.
26, CORNHILL, LONDON.
Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurance and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessities.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.
The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 25 to 65 per cent. on the premiums paid on each policy effected on the profit scale.

| Age. | Sum. | Prem. | Year. | Bonus added. | Bonus in Cash. | Permanent reduction of Premium. | Assured may Borrow. |
|------|-------|--------|-------|--------------|----------------|---------------------------------|---------------------|
| 60 | £1000 | £0 3 4 | 1837 | £217 15 0 | £109 0 11 | £16 0 4 | £445 0 0 |
| | | | 1838 | 192 3 0 | 87 1 4 | 13 10 2 | 395 11 1 |
| | | | 1839 | 165 11 10 | 74 0 10 | 11 3 1 | 346 10 3 |
| | | | 1840 | 116 7 5 | 54 0 10 | 7 18 10 | 296 13 4 |
| | | | 1841 | 111 6 5 | 40 10 0 | 7 10 4 | 247 4 5 |

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

ON NERVOUS DEBILITY AND GENERATIVE DISEASES.
Just published, the thirty-fifth thousand, an improved edition, revised and corrected, 120 pages, price 2s. in a sealed envelope, or forwarded, post-paid, by the Authors, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings.

MANHOOD: the CAUSES of its PREMATURE DECLINE.
with plain directions for its perfect restoration. A Medical Essay on those diseases of the Generative Organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in youth, manhood, and old age; with practical remarks on marriage, the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease, and correspondence, cases, &c.—By J. L. CURTIS & CO., consulting surgeons, 7, Firth-street, Soho-sq., London.

REVIEWS OF THE WORK.
We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, preceptor, or a clergyman.—*Sun, Evening Paper.*

Curtis, on *Manhood*. (Stranger).—Having for many years been the standard work on these diseases, its originality is apparent, and its personal breathes consolation and hope to the mind of the patient.—*Novel and Mystery.*

Manhood: a medical work.—To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions—whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health.—*Chronicle.*

Manhood: by J. L. Curtis and Co.—Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Evening.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row, London; Heywood, Oldham-street, Manchester; Phillips, South Castle-street, Liverpool; Robinson, 11, Greenalder-street, Edinburgh; Berry and Co., Capel-street, Dublin; and, in a sealed envelope, by all booksellers.

Illustrated by 26 Anatomical Coloured Engravings on Steel, On Physical Disqualifications for Marriage, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 2s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities
and decay of the generative system, from excessive indulgence, infection, and the inordinate use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. FERRY & CO., 19, Berners-street, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Titchborne-street, Haymarket; and Gordon 146, Leadenhall-street.

PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—**PART THE SECOND** treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—**PART THE THIRD** treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse of mercury are also clearly pointed out. This section is illustrated by 17 coloured engravings.—**PART THE FOURTH** treats of the prevention of disease by a simple application, by which the danger of infection is obviated. Its action is simple, but sure. It acts with the virus chemically, and destroys its power on the system. This important part of the work should be read by every young man entering into life.—**PART THE FIFTH** is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

THE CORDIAL BALM OF SYRIACUM is exclusively employed in treating nervous and sexual debility, impotency, &c., 11s. and 35s. per bottle.—**THE CONCENTRATED DETENSIVE ESSENCE**, an anti-syphilitic, for purifying the blood in cases of infection, secondary symptoms, eruptions, and the abuse of mercury, 11s. and 35s. per bottle.—**FERRY'S PURIFYING SPECIFIC PILLS**, 2s. 9d., 4s. 6d., and 11s. per box—a certain remedy in gonorrhoea, gleet, stricture, and chronic inflammation of the bladder.—Consultation fee, if by letter, £1. 25 packets, with advice, to be had at the establishment only, by which the fee, £1, is saved.—Attendance daily at 19, Berners-street, from 11 to 2, and 5 to 8; on Sundays, from 11 to 1.—*Edwards, 67, St. Paul's Churchyard; Barclay and Sons, Farringdon-street; Butler, 4, Chesapeake; R. Johnston, 63, Cornhill; L. Hill, New Cross; W. B. Jones, chemist, Kingston; J. W. Tanner, Egham; S. Smith, Windsor; J. B. Shillock, Bromley; T. Riches, London-street, Greenwich; T. Parkes, Woolwich; Ede and Co., Dorking; and John Thurlby, High street, Romford—of whom may be had the *Silent Friend*.*

REMOVED TO No. 37, BEDFORD-SQUARE, LONDON.
DR. LA'MERT ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY.
With 40 coloured engravings on steel.

Just published, and may be had in French or English, in a sealed envelope, 2s. 6d.; or post-free, from the author, for forty-two stamps.

SELF-PRESERVATION: A Medical Treatise, on the Physiology
of Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity, usually acquired at an early period of life, which enervate the physical and mental powers, diminish and enfeeble the natural feelings, and exhaust the vital energies of Manhood; with Practical Observations on the Treatment of Nervous Debility, whether arising from these causes, or the influence of tropical climates; local and constitutional weakness, syphilis, stricture, and all diseases and derangements resulting from indolence; with 40 coloured engravings, illustrating the Anatomy, Physiology, and Diseases of the Reproductive Organs, explaining their various structures, uses, and functions, and the injuries that are produced in them by solitary habits, excesses, and infection.

By SAMUEL LA'MERT, M.D., 37, BEDFORD-SQUARE, LONDON.
Doctor of Medicine, Matriculated Member of the University of Edinburgh, Licentiate of Apothecaries' Hall, London, Honorary Member of the London Hospital Medical Society.

REVIEWS OF THE WORK.
"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its personal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Evening.*

"Unquestionably this is a most extraordinary and skillful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of these establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Morning.*

Sold by Kent and Richards, 31, Paternoster-row; Hannay, 63, Oxford-street; Starie, Titchborne-street, Haymarket; Mansel, 111, Fleet-street; Gordon, 146, Leadenhall-street; or free by post, for 42 stamps, from the author's residence, who may be consulted personally (or by letter) on these disorders daily, from 10 till 2, and from 5 till 8.

MINING ON THE RHINE.

If we follow the Lenna to its source, it brings us to the valleys which fall into the Upper Sieg, at about 80 miles from Hagen. The new Lenna road, a beautiful piece of work, passes in the valley of the Ferndorf, very near a remarkable mine of the steelstone. The Stahlberg of Müsen is the show mine of the district, and was long a source of great wealth, both to the inhabitants of the neighbourhood and to the Counts of Nassau, to whom the district of Siegen originally belonged. The oldest documents in the archives take us back as far as the fourteenth century; but tradition goes far beyond that date. It is even asserted, that it was the possession of this iron-producing district which enabled the Saxon chief Witkind to carry on the 30 years' contest with Charlemagne, which history records. There is nothing about the Stahlberg to justify such an assumption; but the mine is, in other respects, curious enough. Permission is obtained to see the mine from the Government mining officer residing at Müsen, and a small fee is taken for the benefit of the widows' fund. It was Saturday afternoon when we arrived there, and a small building, near the entrance, was occupied as a school-room by such of the miners as desired to improve themselves in plan-drawing and mensuration. This apartment is where the miners assemble daily at prayer before going into the mine. The entrance is by an adit, cut from the lowest point in the valley, and carried 600 fms. on end into the hill. It is 7 ft. high by 4 ft. broad, according to the custom of the country, and is vaulted, being built up with brick where the sides were not formed by the solid rock. The rock, or country, as it is called in Cornwall, is grauwacke-slate, in which the lode, or rather bed, of steelstone, 12 fms. in breadth and 20 to 23 fms. long, runs in a direction of north-east and south-west, inclining at an angle of 80° to 85° east to the horizon. At the south end the lode is cut off by a fault, beyond which it has not yet been possible to find the vein. At the north end it splits into several small veins, which lose themselves after an inconsiderable length. The large central mass formed one of those workings which old miners were particularly fond of, and in which their ingenuity displayed itself by cutting out chambers of irregular dimensions, supported by great pillars left standing at intervals, and communicating with each other by staircases that led from one story to another. As the solid mass of ore rises nearly to the summit of the hill, it might also as well have been quarried out, as is the case in Styria and at Daumemora; and the plan now pursued is, after clearing away all the ore left in the upper chambers, to remove the pillars, and let the surface over the cavity fall in; the miners working continually downward, and the hill following them as they proceed, until they reach the bottom. The height from the adit by which we entered to the highest point excavated is 60 fms., and is divided into 10 stories, the first and second of which are now worked out.

This mine contains the history, and affords the most striking illustration, of the mining theories that for centuries have been acted upon in this district. The ruling wish is to look upon the veins of metal in which Nature has been liberal as a treasure belonging to the land, which must be slowly and economically worked out, that the people may not be impoverished. On such a theory all the calculations of modern mining break down. It discourages all concentration of power and rapidity of work, because the task set to the miner is one that must last for centuries, if possible. Accordingly, in all descriptions of the mine which the stranger meets with, it is gravely asserted, "that at the present rate of working, the streak of ore in the Müsen Mine will furnish employment to the miners for centuries." Of course, the error in this reasoning lies in overlooking the fact, that if the contents of the mine were turned into money, or into capital in any other shape, employment would be just as well found by it, and of a more profitable description than that which old fashioned mining affords. The error is, however, too common in all countries of looking on mining produce as revenue, and not as capital, to be very wonderful here. Besides this notion, others peculiar to the district have much influenced the management of the mine. At present there are but 60 to 70 miners, and 30 to 35 washers and pickers of the ore are employed in the Stahlberg, and the contiguous lead mine named Schwabengrube.

The adit by which we entered cuts a "v" in lead 70 fms. before reaching the iron mine that we have described; and on turning to the left, at this point, the stranger finds himself in the "Schwabengrube." This mine gives a good idea of the lead mining of the district, as the Stahlberg does of the iron mining. It is singular, that in a great many veins sparry iron ore leads to lead below. Hence they have here a proverb that—

"A lead vein to be good
Must have an iron hood."

Welsh miners, we believe, have no great faith in lead veins, that show near the surface. The Schwabengrube has several lodes of irregular breadth, varying from 2 and 3 ft. to several fathoms. In one of the richest workings that we visited, the lode presented a perfect wall of compact lead ore, that sparkled brilliantly to our little lamps; and our curiosity was not a little excited, to know why the works were not pushed with more vigour than seemed to be the case. The whole scene was as different as possible from an English mine. In consequence of there being no winze, or cutting, below the level of the great adit, all water has its discharge by the drain that passes under the sole of that entrance. The mine was, therefore, as dry as a drawing-room, and ladies lightly shod might (and indeed, constantly do) walk over every part of it with perfect impunity. The workings, being all planned by rule, and without much regard to expense, are roomy and convenient for hand labour; but, notwithstanding the length of the adit (three-quarters of an English mile), there is no provision for applying horse-power—a sufficient proof of the nature of the theory which here prevails in mining. Some of the iron ore used to be raised by a shaft at the upper end of the Stahlberg; but this mode has been abandoned, and the shaft converted to the uses of a shot-tower. The miners' dress, too, in consequence of the absence of damp, and equal temperature all the year round, is a black linen jacket, cut full in the round, and compressed by a broad leather strap at the waist, to which is appended a short leather apron, which the miner wears behind, the band clasping before with brass studs, on which the pick and hammer, crossed in the German fashion, serves as a coat of arms, or masonic symbol. The same ornament "in little," generally of silver, decorates the caps of the miners on state occasions, and some care is taken to keep up an *esprit de corps* amongst them, although, from the low wages, the means at the disposal of Government are not great. The miners of the Siegen district, to which Müsen belongs, are nearly all householders, who unite mining with their other occupations. Few besides the captains make it an exclusive occupation. But all are enrolled on the miners' roll of the district, which imposes the obligation to be obedient to the mining authorities, and to pay a small deduction from their wages towards a widows' sick and superannuation fund. The burials and other ceremonies are solemnised with processions of miners on the roll in their best dresses, and have a picturesque effect amidst the wild scenery of this mountain district. But there is no miners' band at Siegen, as in Saxony, Silesia, and Bohemia; and, strange as the assertion may seem, the Slavonians appear more instinctively musical than the Germans, who, even in mountainous parts, with the exception of Tyrol, have no national songs of any antiquity.

There is a friendly manner about the Siegen miner, united with all the shrewdness of a man eternally speculating, and the activity of frame which manual exertion and mountain walking engender. Poor as the wages are—here not above 1s. per diem, although corn is brought by land-carriage from the Rhine, and is dear—yet there is nothing of that gloom and despondency in the looks of these miners that is so often met with in England. The fact is, that while their wants are few, they are intelligent enough to perceive that the demand for labour is not great enough to allow them any influence in industrial calculations. Besides, as mining is here quite free—not being a right of the land, or manorial lord, but dispensed by the Crown—every man has the chance of discovering something of value that may suddenly enrich him. We shall see presently the effect which this notion, and the system that gives birth to it, has on the country. From whatever cause, it is pleasant to see it surrounded with good-natured, if not smiling faces, and to meet with civility within the bowels of the earth, as on its surface, as a habitual feature of society. The miners' greeting—"Glück auf," which, literally translated, is "Luck up"—is the masonic key to that general information which a traveller can demand without intrusion.

The absence of foul air in these workings in the old slate formations makes it unnecessary to use the precaution of Davy's lamp, or the variations common on the continent. A small iron lamp, with the wick projecting in front, as out of a Roman chamber lamp, is suspended to a hook that is carried on the thumb, or balanced on some ledge of stone, where the miner is working. An allowance of a penny per diem is made to the miner, if he finds himself in oil. On these lamps every man cuts his own mark—sometimes the initials of his name, but more frequently some heraldic cognisance—which evinces a taste for pictured alphabets as still prevalent in this class. The lamp hangs by the same hook into his belt when he is walking, into which he also sticks his hammer; and the equipment is usually completed by a small coffee-kettle, in which pottery is often most ingeniously united with copper mountings, and a bag with the bread, buttered or larded, which ekes out with his frugal meal. The hours of work are from six to six, with two half-hour and one hour's interval. When the works are manned for day and night labour, the captains and men change from one to the other every week, working one week by day, and the other by night. No allowance is made for the time spent on the road from their homes to the mine, which is often a walk of some miles, up hill and down, through brake and briar. The treading a snow path in winter is a matter of no small importance where the fall is so heavy as in these hills; and custom has established that the captain shall go first on these occasions, the others following in a single file. The holes for blasting are bored generally single-handed. Double-handed boring is only occasionally resorted to; and we were told that the average of work given in hard slate a fathom of 7 feet high and 34 feet broad, as what two men could do in a month. In soft slate 14 fms. of the same dimensions is good work, and in quartz or crystallised rock 1 fm. is the utmost. The contracts vary in proportions similar to these quantities, and range from \$10 or 20s., to \$30 or \$40 per fm. of 80 in. In these contracts time only enters as an accidental element, the whole system excluding it from mining calculations in these parts. We were told of a visit

paid by some Cornish miners to this mine, who had come over from the English company's establishment at Dillenburg. They set about valuing the work in the English fashion, and so frightened the captains and officials, that they were requested to desist, in order that the miners might not be set astray by their calculations.

The arrangements on the Halde, at the mouth of the adit, testify to the severity of the climate, large erections having been made for the children employed in picking and sorting the ore, in which they work in winter in rooms heated with stoves. The usual ages of sorters are from 13 to 16 or 18, when they go into the mine as *lehrling*, or learners. This being treated as a model mine, is, in fact, a mining school for the whole country; and it is usual when new mines are opened to look for a captain amongst the men. They are thus induced to submit to strict discipline, and learn their business well, that they may deserve recommendation on these occasions. The mine is almost daily visited by some of the numerous officials of the district, and the men have every access to them and to all the information they can impart. The brook which drains the valley passes near the opening of the adit, and its stream drives the blast of two lead foundries upon the scale that is common in this district. One of these is private property, the other is a part of the mining establishment of Müsen, and the assays of all metals are made there which come to the monthly auctions, which are public, and the assay lists are open to the inspection of all. This publicity, which always accompanies the interference of the authorities in Germany, is a remarkable feature in this mining district, and appears strange to an Englishman accustomed to the rigid secrecy of private accounts; nobody here seems to think it an inconvenience. The total sales of lead and copper ores at these auctions amount, in an average year, to about 2000 tons of the former, and some hundred tons of the latter. The richest ores are copper, with a mixture of lead and sulphur, but containing from 5 to 40 per cent. of silver. They occur in small nests, and the German technical term for this ore is *fallera*. Crystals of a light ruby colour, transparent, and bearing a beautiful polish, containing 60 per cent. of silver, are occasionally found, but of course as curiosities. We were shown some at Siegen.

But the flattering assays that are here given are not as easily realised as might be supposed. The lead ore of this country has an enemy that sticks to it in nearly every shape, and renders smelting difficult: this is the antimony, which is sure to be either chemically or mechanically combined with it. At the stamps, near the Stahlberg Mine, large quantities of ore, in which antimony is the principal ingredient, may be seen lying perfectly worthless, from the inability of the smelters to deal with it. The antimony makes the lead too hard to be used by plumbers or for making colours. An English house built works near the Rhine some years back, in the expectation of being able to treat this ore; but, from whatever cause, does not seem to have made it answer.

Another mixture of copper, silver, lead, and nickel, presents here a problem to the scientific smelter. Such ores are usually handed over to the enterprising owner of the upper foundry at Müsen, M. Schmidt.—T. C. BANFIELD'S *Industry of the Rhine*.—[We shall continue our extracts from this interesting volume in next week's Journal, and which will include some interesting details respecting the various methods of smelting practised in the district.]

STANNARIES' JURISDICTION.—At the Castle of Exeter, on Friday last, the case of Fulford and others v. Tripp was disposed of, before John Tyrrell, Esq., the judge of the East Devon Circuit.—The plaintiffs are the managing committee of the Wheal Anna Maria Mine, in the parish of Dunsford, Devon; and the defendant, Mr. Tripp, is a shareholder, and financial agent, residing in Exeter. The action was brought to recover the amount of three several calls of 10s. each, upon 12 shares held by the defendant, as a co-adventurer in the mine. Mr. G. W. Turner appeared for the plaintiffs, and Mr. Laidman for the defendant. Mr. Laidman objected to the jurisdiction of the court. The mine was in the county of Devon, and, therefore, within the stannaries, and the action, he contended, ought to have been brought in the Vice-Warden's Court. The judge read the 141st section of the Act, and said, if this mine is not within the stannaries, I have clearly jurisdiction under the general powers of the Act; if it is within the stannaries, I am of opinion that jurisdiction is given by the latter clause of this section.—Mr. TURNER said, the jurisdiction of the stannaries' court was expressly limited to Cornwall.—Mr. Dunning, the purser of the mine, was then called to prove that the defendant was a shareholder, that he had sold shares in the mine, and that the calls were duly made. Notices were sent to those shareholders who were in arrears of calls, that, unless they paid up within a certain time, their shares would be forfeited, and an intimation to that effect was given to Mr. Tripp at a time when two calls were due; that notice was never acted on, because it was found that the company had no power to forfeit shares.—Mr. LAIDMAN submitted that the action could not be maintained. The defendant might be liable to the creditors of the concern, if it could be shown that he had given any authority to pledge his credit; but to the present plaintiffs, who were co-partners, and joint adventurers with him, he was not liable for the amount of those calls. This mine being worked upon the Cost-book Principle, and there being no deed of settlement, the parties were bound by the resolutions come to at their meetings, and here there was no resolution which gave the parties power to sue. There was no evidence that the calls were necessary, for the purposes of the mine. Lastly, he contended that the plaintiffs, by their circular, had given the defendant the option of forfeiting his shares; that he had exercised that option, and elected to forfeit the shares, rather than pay up the calls; and that they were not, therefore, in a situation to enforce their present claim.—Mr. Tripp was then put into the box, and stated that the parser had told him, that all the present plaintiffs had not paid up their calls, and had mentioned the name of one gentleman particularly; witness had determined to exercise the option of forfeiting the shares rather than pay up the calls, but had given no notice to the company of that determination.—Mr. Vatcher stated that he was present at a meeting of the shareholders, at which there was some talk about forfeiting Mr. Tripp's shares; there was no formal resolution come to, but, in consequence of what passed, he told the defendant that he could not sell his shares, for that they were forfeited.—Mr. Turner was about to reply, when the JUDGE said he would not trouble him. The case was simply this—a parcel of gentlemen had met together, and had arranged among themselves to be joint speculators in a mining concern, and some of them said to the others—"We are not held out to the public, the public know nothing of us; we are not liable for the debts, or for the costs incurred, in carrying on the mine; but if you will enter upon the work, and permit yourselves to be sued for the expenses which you may incur, we will undertake, on our parts, to pay up certain calls." He thought that they were bound by that arrangement, and he, therefore, in this case, gave judgment for the plaintiffs, for the amount claimed.—Mr. LAIDMAN said, with the greatest respect for his Honour's judgment, he had a very strong opinion upon the question of jurisdiction, and he, therefore, asked that the order of payment might be suspended, that the defendant might have an opportunity, if so advised, of applying for a prohibition to a superior court. Order made to pay in a month.—*West Briton*

THE LONDON AND SOUTH-WESTERN RAILWAY—OPENING OF THE METROPOLITAN EXTENSION.—The extension of this line to Waterloo-bridge was to have been opened to the public this day. The first experimental trip took place on Wednesday, and the Government inspector surveyed the line yesterday; when, owing to the unfinished state of the station in Waterloo-road, and the discovery that the triangular bridge across Griffin-street, York-road, which has only been erected within the last fortnight, is not sufficiently consolidated, the directors have been induced to postpone the opening for a few days. The following is a brief account of the works:—The undertaking was commenced in July, 1846—the contract having been taken by the Messrs. Lee, who engaged to complete the works by the 1st July this year. Mr. Thompson, has acted as sole superintendent on the part of the contractors, and Mr. Curlew, on behalf of Mr. Locke, the engineer. The length of the new line is nearly two miles and a quarter. The first quarter of a mile is carried over an embankment, then succeeds a viaduct, consisting of six massive iron girder bridges, and 800 arches (exclusive of those forming the present station in the Waterloo-road). These arches, which are expected to form a very considerable item in the receipts of the company, have been so carefully constructed, as to be easily applicable to various purposes, and their perpetual dryness has been insured by the application of the Seyssel asphalt, which has rendered them impervious to wet. There are four distinct lines of rail, and the quantity of iron alone consumed in laying down what is technically called the "metals," is at least 1200 tons, independently of about 800 tons weight consumed in the erection of the bridges. In the construction of the viaduct and station in the Waterloo-road, upwards of 80,000,000 of bricks have been consumed; and the present terminus, which is all on arches, covers a space of three-quarters of an acre of ground, its width being 260 feet. The major part of the present terminus has been coated with Claridge's asphalt, so that the arches on which it rests may with safety be made use of as storehouses, &c. To the present terminus in the Waterloo-road there are no less than four approaches for carriages and foot-passengers, the pedestrians having in each approach footpaths 8 ft. in width. At Vauxhall station there will be only two entrances. The stations at both Waterloo-road and Vauxhall will be only temporary. The fares on the main line are to be increased as follows:—First class, 6d.; second class, 4d.; third class, 2d. The trains will run at the present fixed times. Nine Elms station is to be closed entirely to passenger traffic, the Vauxhall station being retained for passengers from the south and west of London.

THE MANCHESTER AND ALTRINGHAM RAILWAY.—We understand that at a recent meeting of the directors of this undertaking it was determined to proceed with the works to completion, and that the works will be recommenced with vigour in a few days. There are several bridges to finish, and a good deal of ordinary earthwork to get through at the Altringham end of the line; and as the South Junction line, connecting the stations of the Manchester and Birmingham and Sheffield and Lincolnshire lines in Manchester, with the Liverpool and the Bolton lines, is not expected to be opened till about Christmas, and the opening of the Altringham line depends upon, and must be subsequent to, the opening of the South Junction, which gives it its Manchester terminus and stations, it will, in all probability, be early next year before the Altringham line can be opened through.—*Manchester Guardian.*

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Trelgoh Consols Mining Company—offices, at One.
TUESDAY.....London and Greenwich Railway—offices, at One.
WEDNESDAY.....Wheat Currie Mining Company—Guildhall Coffee-house, at Twelve.
 Anglo-Mexican Mining Association—offices, at One.
 Belgian Eastern Junction Railway—London Tavern, at One.
 Atlas Assurance Company—offices, at One.
 Clergy Mutual Assurance Company—offices, at One.
 Reversionary Interest Society—offices, at half-past Eleven.
THURSDAY.....Provincial Bank of Ireland—offices, at Twelve.
 European Gas Company—offices, at Two.
 Legal and Commercial Assurance Company—offices, at Twelve.
 United Kingdom Assurance Company—offices, at Three.
FRIDAY.....Wheat Trevena Mining Company—Fountain Inn, Liskeard, at Three.
 Imperial Fire Insurance Company—offices, at One.

(The meetings of Mining Companies are inserted among the Mining Intelligence.)

SOUTH AUSTRALIAN BANKING COMPANY.

The seventh annual meeting of proprietors was held on Tuesday, the 27th June, at the offices of the establishment, Old Broad-street, City. There was a very full attendance of proprietors.—E. Divett, Esq., M.P., in the chair.

The advertisement by which the meeting had been convened having been read, and the minutes of the proceedings of the last meeting read and confirmed, Mr. WHEELER (the manager of the bank) laid the following report before the proprietors:

REPORT.

The court of directors of the South Australian Banking Company, offer to the seventh annual general meeting of proprietors the following report of the company's affairs:—The extended emigration to South Australia, and the consequent increase of its general commerce, still further promoted by the successful working of various mines, have made the past year one of great activity; and have called into ready employment the entire capital of this company, although scarcely sufficient time has elapsed to realise the full profits to be expected therefrom.

Wishing to preserve their former plan of having the colonial assets most strictly examined, that no doubtful amounts might be reckoned in the balance-sheet, suitable instructions were renewed to the local directors and manager; and, in his report upon the annual return for 29th November last, Mr. Stephenson states, that "The most careful examination has been made by the local board into every item of the bank's assets, subjecting the whole to that rigid scrutiny ordered to be adopted; and, after mature consideration, it has been unanimously resolved to pass to the loss the few insignificant items, which are included in the profit and loss account."

During the past year, progress has been made in recovering doubtful debts (formerly written off), and in realising securities taken in the earlier period of the colony. The home debt of the South Australian Company has been wholly paid off, and the bank's funds are being concentrated in assets readily available for all the operations.

The summary of the general profit and loss account is as follows—viz.:
 Amount of undivided profits on 31st May, 1847.....£11,600 19 11
 Less appropriated to preliminary expenses & reserve fund 2,600 0 0—£9000 19 11
 Amount formerly placed to contingent account, being reserved from profits, until the interest, &c., allowed to Government on land fund account had been debited at Adelaide.....1000 0 0
 Net total of profits at Adelaide and London, for 1847-8, after every deduction, including the amount of the aforesaid interest on the land fund, and all expenses of the charter of incorporation.....9014 9 4

From which deduct dividend paid in July.....£4114 8 3
 Ditto ditto in January.....4503 2 6
 Income tax paid on former dividend to proprietors.....189 2 7
 Dividend on colonial shares.....12 5 8—8818 19 0

Balance of undivided profits on 29th May, 1848.....£10,196 10 3
 The directors are unwilling to reopen the preliminary expenses account, and have therefore preferred at once debiting to charges account 1847-8, the whole cost of the Charter, and leaving preliminary expenses account undisturbed, rather than alter it by cross entries. For this reason the preliminary expenses account will, until the next balance, remain at 10,000. From the foregoing balance of net profit—viz.: 10,196 10s. 3d.—the directors recommend that 1019 3s., or 10 per cent. (as by the Charter and Deed of Settlement), be added to the reserve fund, which will then be about 31000; and that from the balance, a dividend of 5 per cent. per annum, clear of income tax, upon the capital, be made payable, half-yearly in July and January next as usual.

The annual accounts to 29th May have been duly audited, and will now be submitted for confirmation. A statement of the average weekly assets and liabilities of the colonial establishment to 29th November (the date of the balance) will also be read for your information.

The directors vacating by rotation, are W. Chippendale, Esq., and J. R. Todd, Esq. The auditors, J. Brown, Esq., and F. Ladbroke, Esq., also retire pursuant to the Charter and Deed of Settlement; but all these gentlemen, being eligible for re-election, offer themselves accordingly.

The local board at Adelaide still consists of G. Morphet, Esq., R. F. Newland, Esq., and E. J. S. Trimmer, Esq., for whose efficient services your thanks are due. And the court have pleasure in again reporting the constant efforts of the Adelaide manager, E. Stephens, Esq., for the prosperity of the bank.

In September last Her Majesty's Government granted the long-desired Charter of Incorporation, and you now meet under its provisions. It has been issued on terms likely to prove beneficial to the future interests of the company.

During the year of unparalleled commercial embarrassment, which has occurred since the last meeting, it could scarcely be expected that this bank should escape without some bad debts; and the court of directors have had much additional trouble and anxiety in conducting its affairs; but they have pleasure in announcing that the company has emerged safely from several operations which threatened considerable loss.

The prospects now are, that the cautious system of management under which the business is conducted, and the growing trade of the colony, will soon yield larger returns for the capital of the company.

A detailed statement of the accounts was read to the meeting. Both the report and statement of accounts were exceedingly well received by the proprietors.

The CHAIRMAN said, he should be quite prepared, at a future stage of the proceedings, to offer any explanations that might be considered by the meeting necessary in reference to the directors' report and the statement of accounts that had just been read, and which he hoped—indeed, had every reason to believe—would be deemed satisfactory. (Cheers.) He would, perhaps, be best consulting the wishes of the proprietors (he was extremely glad to see many present), and, at the same time, by at once putting before them a resolution for the reception and adoption of the report and statement of accounts, the motion might lead to some discussion, and he should be happy to offer such observations and explanations as might be rendered necessary thereby. He preferred this course, as many points, on which he might not think it necessary to comment, would probably be considered by some of the proprietors as requiring explanations. In moving this resolution, however, he could not help expressing to the meeting, that the present state of the bank's affairs was a subject of sincere congratulation. (Hear, hear.) He believed they were conducted with great ability, and the principles of management adopted; and he had much satisfaction in stating, that all the instructions sent out to the bank at Adelaide, as well as the spirit of them, had been fully acted on by Mr. Stephens and the local board. He now begged to move—"That the report of the company's operations, as now read, be adopted and circulated, under the direction of the court of directors; also, that the accounts of the company's affairs, to the 29th May last (as now submitted), be approved." Mr. FOSTER then moved, in support of the resolution; and, in doing so, he must be permitted to congratulate the directors and the proprietors on the very satisfactory position of the bank, as evidenced by the report. (Hear, hear.)

Mr. ANGAS saw from the report that, while the bank's circulation amounted to only 17,000, the specie in hand amounted to no less a sum than 68,000. He thought there must be something wrong in the colonial office, when, under such circumstances, so large an amount of specie was required to be held by a bank in the Australian colonies. He thought that, if their learned chairman would make the call the public on the subject, give his attention to this matter, the question of the disproportion between the amount in circulation and the specie in hand might be set at rest. He (Mr. Angus) considered 40,000 to be the extreme amount of specie the bank ought to be called on to have in the colony. He would, before he sat down, call the attention of the meeting to the injury which perhaps might result to the bank from its being confounded with the Bank of Australia, which owed to the Bank of Australasia 200,000. (Hear, hear.) He considered that some steps should be taken to make the distinction clear. (Hear, hear.) He had been travelling through the country, and he found that the end of it to the other great misapprehension prevailed as to the identity of this, the South Australian Banking Company, with the Bank of Australia. Many people in the country knew no difference between the South Australian Banking Company, the Bank of Australia, and the Bank of Australasia—(hear, hear)—and, indeed, many of them were also in ignorance of the difference between New South Wales and South Australia. (Hear, hear, and laughter.) He was much pleased to hear the satisfactory statements laid before the meeting in the report, and he firmly believed, that things were now getting settled in the colony, the directors would be able at the next meeting to give the proprietors a larger dividend. (Hear, hear.)

The CHAIRMAN was much obliged to Mr. Angus for having called the attention of the meeting to the subject of the amount of specie in hand during the last year. He (the chairman) was not prepared to deny that that amount had been in excess; but the amount had arisen from the caution which the directors had felt it necessary to exercise. The distance to South Australia was great; considerable time was, therefore, necessarily occupied in sending the supply required; and the large sum of specie in hand had been occasioned by the desire to keep the bank in a sound condition. Accidental circumstances had helped to increase the amount; the fact being, that a large supply of specie was obtained in the colonies at a time when the directors thought it their duty to send specie from this country to meet the drafts becoming due. Had the directors been aware of what was passing in the colony, some shipments of specie from the bank here might have been avoided. But he thought the directors had acted on the right side. (Cheers.) He might observe, that the drafts on the company last year were very heavy. Mr. Angus had spoken of the circulation of the bank as amounting to 17,000. This was the average of the last half-year. The amount in circulation at the date of the last accounts was about 21,000. It was to be recollected, that the cash deposited in the bank, and liable to be called on at any moment, amounted to upwards of 50,000. (Hear, hear.) It was necessary, in the face of such probable or possible calls on the company, to keep a large reserve of specie, and more especially as during the period large land sales had been going on, and for which very large sums were drawn out of the bank: not sum of 1000, but sums as large as 10,000, at a time—sums, too, which did not come back to the bank, but remained locked up in the Government chest. (Hear, hear.) He, however, thought that, consistently with security, and with a view to produce that fair return which they had a right to expect from the capital embarked by them, the amount of specie might be reduced below what had been their average for the last year. The fact of their being strong in specie had enabled them to accommodate the Bank of Australasia. The draft would not have been able to effect had they not been strong in specie in the colony. As to the ignorance still prevailing with respect to the Australian colonies, he regretted to observe that it was not confined to the people in the country, but extended to the House of Commons itself. It was, therefore, not surprising that persons should confound the South Australian Banking Company with the Bank of Australia, or the Bank of Australasia. They (the proprietors of the South Australian Banking Company) were most anxious it should be known that their establishment was conducted on sound principles—(hear, and cheers)—and it was of importance to them to have it also known, that their

undertaking, once called the Bank of South Australia, and now known as the South Australian Banking Company, was carried on at Adelaide; and that they had no connection whatever with the Bank of Australia, or the Bank of Australasia; that they (the South Australian Banking Company) wished, of course, to conduct their affairs on a friendly footing with other banks, but that they, at the same time, wanted no assistance from them. He was happy to be able to state that a much better knowledge of South Australia was being diffused, and that at the present time great anxiety was manifested to proceed there. (Hear, hear.) Perhaps there was no colony in the world more productive than South Australia, which for our unemployed labouring classes was a special paradise.—Mr. ANGAS expressed his satisfaction at the explanations given by the chairman.

Mr. W. GRANT inquired the amount of liability under which the shareholders would lie, in case the establishment got involved in difficulties?—The CHAIRMAN said, it was double the amount of stock held. If a proprietor held, say 10000, he would be liable to the extent of an additional 10000.—Mr. W. GRANT begged to express his perfect satisfaction with the report of the directors.

The CHAIRMAN, in answer to a question from one of the proprietors, said, that under the Deed of Settlement, if a loss of one-fourth of the capital were sustained, a meeting of the company would have to be held, for the purpose of ascertaining whether it was considered desirable to continue to carry on the undertaking.

The Rev. THOMAS TIMPSON inquired what the profits in the colonies had been during the past year?

—The CHAIRMAN said the drafts on them from the colony during the period had been very heavy, and they came at a time when the rate of interest was high. The bank had no difficulty in getting money; but they necessarily had to pay a heavy rate of interest; and, although they last year added to the credit of their profit and loss account the sum of 20000, there was to the debit of the interest account in London a sum of between 4000 and 5000. The colonial profits for the last year were larger than those of the previous 12 months. (Cheers.)—The Rev. THOMAS TIMPSON: I am perfectly satisfied.

The motion was then put and carried unanimously.

Mr. J. R. MILLS had great pleasure in moving, that the recommendation of the directors to the proprietors, to the effect, that the directors should receive a salary (clear of income tax) on the paid-up capital be adopted, and that they be authorised to pay the same half-yearly as before.—Mr. C. ROBERTS seconded the motion, which was carried unanimously.

Mr. W. J. TILLEY moved, and Mr. E. W. SMITH seconded, the following motion, which was carried unanimously:—"That William Chippendale and James Ruddell Todd, Esqrs., be re-elected as directors; and John Brown and Felix Ladbroke, Esqrs., as auditors of the company."

It was then moved by Mr. J. BROWN, seconded by Mr. W. GRANT, and carried unanimously—"That the thanks of the proprietors are eminently due, and are hereby given to the chairman and directors, for their great attention to the concerns of the company."

The CHAIRMAN returned thanks; and, in doing so, spoke very warmly in praise of the unwearied and able exertions of the local directors at Adelaide, of the manager (Mr. Stephens), and of the London manager (Mr. Wheeler). He concluded by moving, that the best thanks of the meeting be given to those gentlemen.—The motion was carried.

Mr. WHEELER returned thanks, and the usual compliment having been paid to the chairman, the meeting broke up.

SOUTH AUSTRALIAN COMPANY.

The twelfth annual general meeting of proprietors of the above company was held, at the offices, New Broad-street, on Wednesday, the 28th June.

J. R. TODD, Esq., in the chair.

The advertisement convening the meeting having been read, the minutes of the previous annual meeting were also read and confirmed.

Mr. M'LAREN (the manager) then read the report of the directors, of which the following is a summary:—

Particular inventories of the company's colonial property has been received from the manager, amounting to 308,921 8s. 1d. Those had been examined and approved by the board of directors. The sale of about eight acres of town land at Adelaide, had yielded a profit over the former valuation of 10000; and the sale of 229 acres of country lands, a profit of 3281 3s. 6d.

Notwithstanding the great excitement produced by the discovery and working of the mineral resources of the colony, agricultural operations continue to be rapidly extended, so that the marginal land during the last year for farms—the total quantity leased being 21,657 acres, at an average rent of about 8s. per acre. The annual rent of the buildings in Adelaide and at Port Adelaide, for the 29th of Sept. last, amounted, as per rent-roll, to.....£3304 13 7
 The receipts from the wharf to.....1321 11 6

The rent of the country lands, on the 29th of Sept. last, amounted, as per rent-roll, to.....3915 17 3

Being a total increase during the year of 14577 15s. 3d. The town and port buildings contributing of this increase 4995 1s. 1d.; the wharf, 7307 19s. 5d.; and the country lands, 2277 14s. 9d.

The net proceeds of last year's clip of wool amounted to 46127 14s. 1d., being an increase beyond the preceding year of 127 8s. 8d. The whole of the current year's clip has been received amounting to 459 bales, against 360 bales of the preceding year; and this year's had been already sold, but the market was in a very unfavourable state.

The sales of cattle and sheep in the colony, including those killed for rations, amounted to 29802 8s. 9d.

The following is the summary of the revenue for the last year, from the various departments advertised to in the preceding part of this report:—

Sale of town and country lands.....£1328 3 6
 Town and country buildings, including wharf, port, and wharf.....4626 5 1
 Country rental, as per rent-roll.....3915 17 3
 Net proceeds of last year's clip of wool.....4612 14 1
 Sales of sheep and cattle, including value of those killed for rations.....2980 8 9

£17,463 8 8
 Last year the increase of the stock was as follows: 16,028 lambs, 316 calves, and 13 foals. The gross numbers at the 31st October last were, 47,326 sheep, 2624 horned cattle, and 102 horses.

The total current expenses during the year, exclusive of those connected with the mineral operations, were:—In the colony, 75247 4s. 1d.; in London, 35117 1s. 5d.; making together 110,364 5s. 6d.

The total expenditure at the mines during the last year amounted to 62027 12s. 2d., but a considerable part of that amount was incurred in erecting cottages for the workmen; in sinking shafts, and in other operations which are necessarily connected with commencing mining operations, but which, of course, do not require to be repeated. The most minute details of these expenses are regularly received from Mr. Giles, and the strictest account appears to be practised by him in regard to them.

The cautious proceedings of the directors, in regard to operations in mining, as announced in the last report, having been approved by the proprietors, the board resolved to continue to pursue that course; but, at the same time, to adopt measures for the purpose of securing a more extensive and profitable working of the mines. They therefore engaged a mining captain, of whose character, qualifications, and experience they obtained the most satisfactory testimonials, who sailed from Plymouth on the 5th March. Till the arrival of one appointed by the board, and fully competent to direct in every particular these operations, and to form a just opinion of the probability of their success, the directors were determined not to incur much expense in this department, and have no doubt the shareholders will approve of this cautious policy.

During the year embraced in this report there have been sold only 228 tons of ore, the greater part of which (as mentioned in the last report), having been obtained near the surface of the ground, brought a low average price. Previously to the expiry of the colonial year, ending 31st October last, Mr. Giles shipped 120 tons, which have not yet arrived. From the 1st November to the 31st January last, he shipped 420 tons, and expected by the end of March to send 250 tons more, and 4000 bushels of wheat. Of those shipments we have now in the London Docks 220 tons, and at Swansea 200 tons, and which last the board hoped would have been sold previously to this date, but they have remained at Swansea since that date, and are to be sold to-morrow (29th June), and the remainder on 13th proximo.

The board being persuaded that the proprietors would unanimously approve of leasing portions of their mineral lands to parties who would work them with spirit, entered into a negotiation with two respectable companies here, and have much pleasure in announcing to the meeting, that they have made conditional arrangements with both. Two portions in the Mount Barker district, and one in Lynedoch Valley, have thus been agreed to be leased to the companies, and the lease is to be given to the two companies, who are engaged in mining operations, of whose character, qualifications, and experience they obtained the most satisfactory testimonials, who sailed from Plymouth on the 5th March. Till the arrival of one appointed by the board, and fully competent to direct in every particular these operations, and to form a just opinion of the probability of their success, the directors were determined not to incur much expense in this department, and have no doubt the shareholders will approve of this cautious policy.

From the rapid increase of business at Port Adelaide, additional accommodation for the shipping was required, which we have afforded by an extension of our wharf, so that eight vessels may now be discharged at one time. If more extensive accommodation be required, we will use our power to supply it.

It gives the board much pleasure to state, that the financial measures which they proposed to the last general meeting, and which the proprietors unanimously adopted, was carried into effect in a manner the most satisfactory. Notwithstanding the unprecedented commercial distress of last year, the requisite amount was obtained—the object of that measure was gained—your debt to the South Australian Banking Company having been wholly paid, and the amount due on debentures reduced upwards of 30000. It is gratifying to find that none of the new shares came into the market—the proprietors having taken them all.

The board with much pleasure submit to the meeting the propriety of declaring a dividend for the current year at the rate of 1s. per share on all shares fully paid up—one-half of the said dividend to be payable on July 29, and the other on January 29 next. Our late respected chairman, G. F. Angus, Esq., having lately resigned his seat at the board, J. R. Todd, Esq., was unanimously appointed chairman.

A vacancy in the direction having occurred in consequence of the death of H. Waymott, Esq., the directors, in terms of the Deed of Settlement, made temporary provision for supplying the vacancy until the annual general meeting, by appointing T. F. Russell, Esq. (the second largest shareholder), who proposes himself to the meeting as a candidate for that office. The two directors who retire are E. Divett, Esq., M.P., and J. Wheeler, Esq., who offer themselves for re-election, as do the two auditors, who retire agreeably to the provisions of the Deed of Settlement.

Her Majesty having appointed Col. Robt. Le Lieutenant-governor of the colony, to an official situation in the Mauritius, Sir H. E. F. Young has become his successor in South Australia, and his high character encourages the most favourable hopes of the success of his administration.

The colonial land and emigration commissioners continue to send regular supplies of food, and have reason to believe, well-selected emigrants to our colony; and, at the present time, three vessels are under charter by them, all to sail in the course of next month. So great a fair trade has South Australia become with the public, that considerable numbers, even of the labouring classes, are proceeding thither at their own expense.

In conclusion, the directors consider themselves fully justified in congratulating the proprietors on the already advanced and rapidly improving state of the colony and the company's affairs; and renew the expression of their opinion, that we shall henceforth receive an adequate return for our capital, and a gratifying reward for your kind forbearance and patience, during a long season of unproductiveness. To accomplish this object the best energies of the board will continue to be exerted.

A very full statement of accounts, and a summary of the balance-sheet, were read.

The CHAIRMAN said, it was, perhaps, to be expected that before a resolution was proposed for the adoption of the directors' report, he should offer a few observations bearing on the principal topics contained in it. These observations should be as few as possible, as it seemed to him, and no doubt, it would also appear to the majority of the shareholders present, that the report was very full and clear, and he hoped very satisfactory (Hear, hear.) But before he proceeded to make any observations, he must ask the meeting that indulgence which his deficiencies certainly required, succeeding, as he did, a chairman who had so long and so ably presided over the affairs of the company. From

the infancy of the undertaking, and from the foundation of the colony, the time, talents, and capital of their late chairman (Mr. Angus) had been devoted to the prosperity of both. It was not, perhaps, proper for him in the presence of that gentleman to go at length into the services he had rendered the proprietors of that company and the inhabitants of South Australia; but he might observe, that it would be a satisfaction to all of them to know that Mr. Angus's name would be inseparably connected with the foundation and the history of the colony. (Cheers.) He would now, with their permission, offer a few remarks in reference to the company's mines, live stock, and land. The mineral wealth of the colony was, from the success which had attended the working of particular mines, not a matter of question or probability—that wealth was now undoubted, and he believed he was perfectly correct in stating that the company was possessed of a very considerable portion of that wealth. But mining operations, however, were proverbially of an uncertain character; and the attention of the directors was peculiarly directed to the necessity of the greatest possible economy being exercised in the measures taken to test the qualities of the mines—for that, and not the working of the mines to any extent, appeared to be the business of the company. The most stringent instructions had been sent to Mr. Giles (the manager in the colony) to test their value, and not to do anything that would not bring profit to the undertaking. There were some drawbacks to working the mines. The distance of the colony was great, and the wages were very high—they being no less than from 24s. to 25s. per week, besides rations, which amounted to 10s. more; while mutton was selling at from 1d. to 2d. per pound, and wheat at 4s. per bushel. He might, in passing, notice the great inducement which this fact held out to the workmen of this country to emigrate to South Australia—indeed, that colony was becoming a favourite one with emigrants, as was evidenced by the number of persons who were being sent there by the Emigration Commissioners, and the large numbers who were proceeding thither at their own expense. With respect to the mining operations of the colony, it was, perhaps, necessary to state, that a smelting party had gone out. This would tend, of course, to reduce the freightage. As for their flocks and herds, the capacity for production had proved to be much greater than the consumption of the colony, so much so that, notwithstanding the large number of emigrants that had arrived, it had become a question whether they should not "boil down," as they did Sydney, so great had been the increase in sheep and cattle. With respect to their lands, he was happy to be able to state, that the company had the brightest prospects of future success. Notwithstanding the amount which they saw by the reports had been received on account of country lands, one-half of that portion of the company's property was at present not producing anything; but it must, from the increasing population of the colony, soon become productive. A most rigid scrutiny had been made into the inventories they had received of the property of the bank; and the directors had great pleasure in assuring the proprietors that the whole of the capital was intact. (Cheers.) He then moved that the report of the directors be adopted.

Colonel TORRENS had very great satisfaction in seconding the motion, and in doing so he begged leave to express his entire sympathy in the eulogy which had been pronounced on Mr. Angus, the late chairman of the board, from whom a more upright and benevolent man never entered on the transaction of public affairs. (Cheers.) He had heard the report with great satisfaction, and entire agreement with the chairman's opinion, which he held him as to the increased value of the land of the colony by the discovery of its mineral wealth. Although there might, as the chairman had stated, be some uncertainty as to the produce they would obtain from the mines, it could not be doubted that the large number of persons required to work these mines would give to the lands of the company a constantly increasing value. (Hear, hear.) He believed that, if he had a large sum of money at his disposal, he could not possibly employ it in a better manner than by investing it in this company.

After considerable discussion on the recommendation of the farming operations of the company, which were very ably explained by Mr. Divett, M.P., the report was put and carried unanimously.

Mr. C. HINDLEY, M.P., complained of the promises of the directors, in their former reports, not having been fulfilled. He thought they had done enough for Australia, and that they ought now to do something for themselves.

The Rev. THOS. TIMPSON moved that the dividend, as recommended by the directors, be declared.—Mr. E. W. SMITH seconded the motion, which was carried. Mr. John Wheeler, G. F. Angus, Esq., and Mr. Thomas Russell were elected directors, in the place of H. Waymott, Esq.; also, that Mr. John Barley White, and Mr. William Richards (the auditors retiring), be re-elected. He would allude to the observations of the hon. proprietor (Mr. Hindley), who spoke of the diminished value of their assets. Now, he thought for this statement the directors were more deserving of commendation than of blame—for he would ask, if it was not prudent on their part, after the Government had taken measures for reducing the value of property, to proceed also to reduce the value of their property in the colony? The directors, as to the suspension of dividends also complained of, the hon. proprietor must also approve of that, if he would only reflect that it was one means deemed necessary to resuscitate the colony. Did he also forget how great a portion of the money of this company, for the purchase of lands, had been devoted to sending over emigrants free of expense to the colony? These complaints, on the part of Mr. Hindley, brought a variety of circumstances to his recollection; and one was a feeling of regret, that this gentleman had felt it his duty to abandon them when they were the greatest difficulty. (Hear, hear.) If they only considered the important experiment, and the great principle the board had been engaged in carrying out, they must agree, that the course of their proceedings must have been attended with great anxiety and many difficulties; if, indeed, they compared the present state of this company with other concerns which had been prosecuting such works, he thought there was reason for congratulation, instead of complaint, in the report of that day. (Hear, hear.) Let them look to Australasia, which was attempted to be established by men of considerable influence—and what was the result? Why, the colony was not in existence; there was scarcely a single house, or a single man left on that property, to tell the tale. Then go to New Zealand. What was the result of that experiment?—Why, after 8 or 10 years of labour, and the expenditure of 400,000, they had nothing left of their capital, except in the value of their land and as a colonisation company. He might go into the case also of Beauchamp; but it was not requisite. Looking at these facts, he would ask them, whether there was much ground for complaint at the position of this company, with its capital entire, its revenues increasing, and the prospect of improving dividends? He felt gratified beyond measure for the kind sentiments expressed towards him by the chairman and several proprietors; and he would only say, that he had always felt it his duty to stand by the company in its difficulties, as well as for the stake he had in its welfare; but, if, after a course of anxiety and up-hill work for 12 years, which must certainly have its effect on the nervous system, he thought it advisable now to retire, when the company was emerging from its perplexities, it could not certainly be imputed to him as any sign of a want of confidence in the undertaking. (Hear, hear.) He begged to compliment them for the kind sentiments expressed towards him by the chairman, and he hoped nothing would induce him to withdraw from this society, for whose benefit he had made such great exertions. The gentleman who now succeeded Mr. Wheeler was a large proprietor in the company. As to the auditors, he need not mention anything about them, as they were well known to the proprietors.

Mr. C. ROBERTS seconded the motion, which was passed unanimously.—Mr. Divett, M.P., returned thanks, and likewise Mr. JOHN BARLEY WHITE.

It was next decided that the shareholders shall be called together twice during the year, for the purpose of receiving such information relative to the affairs of the company as may have been received by the directors, and that the first meeting shall be held on the 29th December next.

The following motion, in testimony of the services of Mr. Angus, the late chairman of the company, was carried by acclamation:—"That the best acknowledgments of this meeting are due to G. F. Angus, Esq., the chairman of the board of directors of this company during the past 12 years, for his intelligent, devoted, and valuable services to the colony, and that this resolution be transmitted to him by the chairman."

Thanks were also voted to Mr. M'Laren, the manager, and to Mr. Giles, the manager in South Australia.—Mr. M'LAREN returned thanks, and the usual compliment having been given to the chairman, the meeting broke up.

BANK OF AUSTRALASIA.

The fourteenth annual meeting of this company was held, on Monday last, at the offices, Austin-frirs—O. FARRER, Esq., in the chair.

The SECRETARY (W. MILLIKEN, Esq.) read the report, from which we extract the following:—

During this, their 14th annual report to the proprietors, the directors proceed to notice the transactions of the past year of account, ending the 11th of October last, and such other matters of interest as are connected therewith. The statements (made up to the above-mentioned period) from the various branches in the colonies, exhibit, upon the whole, a satisfactory result, particularly at Hobart Town, Melbourne, and Adelaide; and, viewed distinct from the old accounts, may be considered as realising the expectations entertained by the directors.

The proprietors will be pleased to learn that no material loss has been incurred by bills running on the houses that have stopped payment, or on those held in the London office as security for loans.

The directors have to congratulate the proprietors upon the successful issue of the appeal in the case against the Bank of Australia. The Privy Council has decided every point in favour of the Bank of Australasia, directing the costs of the action at Sydney to be paid by the defendants, together with interest upon the original debt. The directors have transmitted the order in council to Sydney, with instructions to proceed at once to the payment of the debt; and they will, as soon as possible, place themselves in a position to follow such a course, as circumstances may render necessary, with regard to the shareholders in this country.

The labour question, on which the interests of the colonists, and of the bank, so materially depend, appears at last to have excited the active attention, not only of the Government, but also of the public generally. Emigration from this country has been resumed; and the directors have substantial grounds for stating that a further extension of progress, if labour be adequately supplied, is a great improvement in the value of all Australian property must follow—but, up to the latest advice, the want of hands was severely felt, particularly in the older settlements, and formed a topic of loud and general complaint. Whatever, therefore, may be the well-grounded hope for the future, the period embraced in the present report shows no amelioration in this respect. The continued depreciation in the price of wool, the great staple of the Australian colonies, at the same time operates powerfully to keep them in the state of depression from which they have so long suffered. And, under the joint influence of these unfavourable circumstances, the value of land, stock, and all depending interests, remains nearly in the same uncertain position as heretofore.

The effect of this state of things has been to cause a serious falling off in the estimated value of the properties held in security for old debts, as well as to affect the position of many of the old debtors to the old bank, and to lead to the apprehension of a considerable loss beyond that already calculated upon.

The directors would have been very pleased had they been able to arrive at any estimate satisfactory to their own minds, of which they could feel justified in laying before the proprietors, as to the extent of such further loss on the old accounts; but this has been found impracticable, in consequence of the superintendents, Mr. Hart and Mr. Atherton, taking such widely different views on the subject, that the joint report which they had been directed to furnish cannot now be looked for.

Mr. Hart is of opinion, that by following a course of gradual liquidation, the properties may, in most instances, be made to realise the amount which they represent on the bank's books, without leaving any serious deficiency. Mr. Atherton, on the other hand, apparently basing his calculations on the present depreciated value of property, estimates that the loss on winding up these several concerns will be very considerable.

The statement of accounts showed the net profit of the year as 50,369 17s. 10d.; from which deduct deficiency on bad debt fund, at 12th October, 1846, as shown in last report 1242 13s.; law expenses in the suit against the Bank of Australia, 1261 5s. 1d.; irrecoverable debts written off this year, in London and the colonies, 7064 10s. 5d.—leaves balances on bad debt fund, not yet appropriated, 33,914 9s. 4d.

The directors cannot encourage the expectation that this sum will suffice to provide for the whole losses that may hereafter arise on secured accounts and other dependencies, which cannot at present be realised, or wound up; neither, as already explained, are they in a position to form any correct estimate of the amount by which the fund may be exceeded by such losses, as that must depend on the future welfare of the colonies. They beg, however, to remind the proprietors, that the arrears of interest due by the Bank of Australia upon their debt, and not yet introduced into their accounts, inasmuch as the costs of the action to be recovered at Sydney, will form a considerable augmentation to that fund.

CARDIGANSHIRE GREAT LEAD BASIN.

[We find that the importation of lead, as compared with the previous years' returns in 1846 and 1847, decreased from 7862 to 3932 tons, and British exports increased from 6422 to 8259 tons; thus showing an increase of 5767 tons in favour of the lead mines of this kingdom—an increase that may reasonably be expected to be greater this year, arising from the present position of affairs between this country and Spain. In consequence of these facts, we have deemed it prudent to direct attention to the great lead basin of Cardiganshire. We cannot close these introductory remarks, however, without stating the advantage likely to arise to owners of mines in being liberal to lessees in the royalty demanded from them.]

The depression that has for some time past overhung British industry, induces us to lay before our readers some particulars relative to this great lead district; and, in doing so, we cannot help calling attention to the beautiful maps recently published by the Ordnance, under the superintendence of Sir H. De la Beche and others, in which are most accurately laid down the various lodes, or veins, of ore in this kingdom.

The basin may be divided into two districts: the one on the north may be styled "the silver-lead district," and the more southern portion "the lead district," inasmuch as it contains but a small portion of silver, compared with the northern.

The former may be said to commence with the River Rheidol, running almost due north, and the latter the ground on the southern side of that river.

To give a complete description of all the lodes would occupy more space than we could well spare. There are, however, several which may be called champion lodes, and others which are (though not long) very important and valuable—frequently a number of lodes being clustered together. The first champion lode in the silver-lead district is about nine miles in extent, running nearly east and west from Cefnllwyd to Esgar-galed, and travels through the mines called Brynllwyd, Llechwyddhen, Llechwyddale, Lletynhen and Lower Cwmbach.

The second champion lode northward commences at Elgar Mine, and runs to Hanwlwlch Mine, through Moelyglomen. The third commences near the great cluster of lodes at Tal-y-bont, and runs through the great Petoai Mine, called Esgar-hir, to Avon Llechwydd Mawr, a distance of five miles. Near the first lode, close upon Lletynhen and Llechwyddale, is the great Cwm-symlog Mine, worked by Sir Hugh Myddleton, with the profits of which he brought the New River to London. Adjoining, near this, is Darren, Cwm-sebon, Cwm Erfin, Bwlch Consols, and Goginan, all important and valuable mines. Near the commencement of the second champion lode is the cluster of lodes forming the Pen-y-cefn and Elgar mines. The great cluster of lodes at Tal-y-bont have been most productive, and worked to a considerable profit. There are several valuable mines not included in this hurried description; for, as we have observed, it is impossible, within the reasonable limits of an article in a daily journal, to consider them all.

We are obliged, therefore, to defer even a description of the southern portion of the basin, though we hope at some future time to enter upon them; and, in the meantime, we would suggest that some gentleman would give the subject his consideration, and publish an account of all the mines, statistical and otherwise; for we feel persuaded, that such a production would not only be well received by the mining public, but would be productive of profit to the author. We have taken a good deal of trouble in applying to the best sources to which we could gain access for information as to most of the Cardiganshire mines, though, of course, it is impossible to arrive at an accurate amount, or entire return, for the whole of the mines of any district; and in this there is a peculiar difficulty in that respect, in consequence of nearly the whole of them having been worked by private companies or individuals. To give some idea of the value of lead mines in this district, we may state that one company, with an investment of only 2500*l.*, exclusive of the purchase of grants, have made 18,000*l.* per annum profits.

We cannot shut our eyes to the fact, that a sum of near 50,000*l.* has been lost by injudicious mining and mismanagement; but, on the other hand, there are mines with trifling investments, which have, within the last 15 years, yielded immense returns. For instance:—

| Names of Mines. | Investment. | Annual Return. | Profit, 15 yrs. |
|-------------------|-------------|----------------|-----------------|
| Lisburne | £2500 | | £100,000 |
| Cwm-yatwlch | 2000 | 7000 | 85,000 |
| Goginan | 500 | 8000 | 80,000 |
| Esgar-galed | 5000 | 5000 | 40,000 |

Thus showing that, by an outlay of 10,000*l.*, an annual income is produced of 28,000*l.*; and the adventurers have already received in profit 225,000*l.* The old mines of this district, according to historical information, may, according to the information we have received, be set down as follows:—

| Names of Mines. | Investment. | Annual Return. | Total Profits. |
|-------------------|-------------|----------------|----------------|
| Alt Crebe | £5,000 | £5,000 | £50,000 |
| Bryn Pien | 10,000 | 5,000 | 40,000 |
| Cwm-symlog | unknown | 25,000 | 250,000 |
| Cwm-yatwlch | 10,000 | 7,000 | 500,000 |
| Danesh | unknown | 5,000 | 50,000 |
| Esgarmyrrwa | 50 | 20,000 | 250,000 |
| Esgarmyrrwa | 10,000 | 10,000 | 100,000 |
| Grogynian | 3,000 | 5,000 | 60,000 |
| Pen-y-cefn | 2,000 | 2,000 | 15,000 |
| Other mines | 150,000 | — | 300 |

Assuming the above summary to be correct, and we believe that it is as near as it can be made, it will be seen that, on an outlay of say 200,000*l.*, the adventurers have realised 112,000*l.* a year, and received in profits 1,920,000*l.*

We have taken some trouble to follow out the summary above given, by preparing another of the mines now opening, and not brought into full profit, which we believe is as nearly correct as the nature of the calculations will admit of, being furnished by a gentleman with local knowledge and experience in Cardiganshire, probably equal to any one of the present day. He says—"I shall also add, that such a capital now invested, under skilful management, would, in all probability, produce equal results."

Mines now opening, not brought into Profit.

| Names of Mines. | Capital expended. | Yet required. | Calc. profit per ann. |
|------------------------|-------------------|---------------|-----------------------|
| Bwlch Consols | £10,000 | | £10,000 |
| Boy | 2,000 | — | 1,000 |
| Cwm Erfin | 2,000 | 500 | 1,500 |
| Cwm-yatwlch | 3,000 | | 10,000 |
| Cwm-symlog | 25,000 | 20,000 | 10,000 |
| Cwm-sebon | 10,000 | 2,000 | 2,000 |
| Cefn Cwm Brynna | 2,000 | 2,000 | 1,000 |
| Crown Mines | 5,000 | 5,000 | 5,000 |
| Esgar-hir | 20,000 | 20,000 | 15,000 |
| Eslwyn-hen Mines | 4,000 | 2,000 | 2,000 |
| Gwylwyn | 300 | 1,500 | 10,000 |
| Llechny-hen | 1,400 | 2,600 | 3,000 |
| Pen-y-cefn | 2,000 | 4,000 | 2,000 |
| Pearlview | 3,000 | 200 | 1,000 |
| Tylwyd | 1,200 | 1,000 | 2,000 |

Before closing this article, we believe that we may properly again subscribe to the truth of a quotation which we made from the *Mining Journal*, on the 26th of April last, and which equally applies to many of the mines mentioned in the foregoing summary:—"In what other class of investments can you show such enormous profits; and how necessary it is to rid the market of any visionary adventures, which so dreadfully tarnish these splendid and successful ones."—*Morning Post.*

ACCIDENTS.

Melancholy Accident.—A melancholy occurrence took place at Byker Pit, in the neighbourhood of Newcastle-upon-Tyne, a few days ago. The pit had been laid in, or ceased working, some months ago, but the machinery and working gear still remained, and the cage by which the workmen descended the shaft was attached to a pulley, and suspended about 8 feet down the pit shaft. Two brothers of the name of Hamilton were playing near the spot, and one of them got hold of the pulley rope, and, sliding down it, got into the cage, where, it is supposed, being overcome by the foul air, he became insensible, and lay down at the bottom of the cage. His brother John shouted in vain to him to get up, until, being afraid he had taken a fit, he also attempted to descend the rope, but in doing so he slipped, and fell down the shaft, a depth of 30 fathoms, where there were upwards of 10 feet of water. A man, named Cuthbert Brown, who was getting his dinner in an engine-house adjoining, observing that an accident had occurred, hastened to the shaft, and went down into the cage to get the youth out, when he also was overpowered, staggered over the cage, and fell to the bottom of the shaft. By this time several parties had arrived at the spot, when the cage was hoisted up, and medical aid having been procured, the lad was soon restored to a state of consciousness. The shaft was afterwards dragged, and the bodies of the man and the other boy recovered. The jury returned a verdict of "Accidental death," but great blame is attached to the proprietor of the works for leaving them in such an unprotected state; notwithstanding, the shaft was in a private inclosure, and some distance from the main road, where the boys had no right to go.

Middleton-in-Teesdale.—As T. Horn was working with his son at Hudhopehead lead mine, belonging to the London Lead Company, he accidentally fell down a rise, or hopper, a perpendicular depth of 40 feet. One of his arms and two ribs were broken; he was also much bruised and hurt internally, from the effects of which he subsequently died.

Coal-Pit on Fire.—On Thursday morning, when the men employed in the Sheffield Coal Company's Pit at Carbrook, near Attercliffe, went to work, they were surprised to see an ample and unusual volume of smoke issuing from the "air pit," which is sunk a few rods from the "drawing shaft," or that up which the coals are brought to bank. The air-pit, as its name implies, is used for ventilating the subterranean workings; an iron basket, containing a fire of cinders, being suspended in it by a chain. On drawing this up, and perceiving that smoke continued to rise, the men threw several buckets of water down the pit, which appeared rather to add than detract from the combustion below. On the arrival of Hoppensall, the overlooker, he ordered the pit to be closely boarded and sealed over, and the adjacent brook to be turned into it: at the same time stopping the pumping-engine, to allow the water to overflow the works. It would, however, be some time before this object was effected, from the difference in the bottom levels—the drawing shaft being about 100 feet deep, and the air-pit not near so many. As it appeared desirable to prevent all access of air until the fire was extinguished, the mouth of the drawing shaft was also closely made up on Thursday evening. How the fire originated, or to what extent it has gone, was not ascertained, as it could not safely be examined either from above or below: most probably the ignition was caused by the dropping of hot cinders from the fire-pit; but whether the combustion at the bottom was confined to some heap of waste coal, accidentally placed there, or was connected with the unwrought seam, remains to be ascertained.—*Sheffield Inq.*

Mining Correspondence.

ENGLISH MINES.

ANTIMONY AND SILVER-LEAD.—Capt. Charles Williams (June 29) reports—I am happy to inform you the men yesterday cut No. 1 lode; and, although we are but 4 fms. deep, it is a very promising lode, but by means settled, being split up in various branches, each carrying fine stones of lead, similar to that sent from our other lode, and, I think, the strongest mundie I ever saw; the gossan also is very strong, evidently having undergone a great action of heat. This end was set, on Saturday last, for 42s. per fm.; sinking winze on the last discovered lode, 40s. per fm.; and in the end of Grenville adit, 90s. per fm. Our buildings will be covered in next week. I have nearly finished my calculations of the engine-house, &c., which you shall have in a day or two. I intend at once to sink another winze on No. 1 lode a few fathoms, to see how it goes down, and get what ore we can. We shall be prepared for dressing our lead in a few days; we have got a dresser putting in the floors, &c., for that purpose.

BARRISTOWN.—Capt. T. Angove (June 29) reports—The adit end east of Nangle's shaft is still improved; the lode is now producing $\frac{1}{2}$ ton per fm.; in the winze sinking under this level the lode is large and regular, but not producing so much ore as when last reported; the pitches are producing about the same quantity of lead. In the cross-course, south from eastern flat-rod shaft, we have driven through small branches of carbonate of iron, mixed with lead. There is no further change. We shall have another cargo of ore ready about the latter end of July.

BEDFORD UNITED.—Capt. James Phillips (June 28) reports—At Wheal Marquis the engine-shaft is 1 fm. 3 ft. under the 90 fm. level—ground favourable for sinking. In the 90 fm. level east, the lode will produce about 3 tons of ore per fm. There has been no lode taken down in this level west in the past week; the slopes in the back of this level are worth about 25*l.* per fm. The lode in Hodges's rise, in this level, is 2 ft. wide—saving work. In the 80 fm. level east, the lode is 18 in. wide, composed of spar, mundie, and ore, and, in its general character, indicating improvement. In Evans's winze, in the 70 fm. level, the lode is 2½ ft. wide—good saving work.

COMBLAWN.—Captain James Hosking (June 28) reports—The lode in the 15 fm. level is 2 ft. 6 in. wide—orey throughout. My belief is, that we are near the great cross-course, which, in all probability, is 4 fms. east of the engine-shaft; that the lode will be found far more productive than at present; the new winch-shaft is down 11 fms. 3 ft. below the surface; the lode is very much disordered, and the underlie full 3 ft. in a fathom. We have cleared up the shaft in the north mine 7 fms.; but have not yet found the level driven east on the lode.

CWM ERFIN.—Capt. Samuel Nicholls (June 24) reports—The lode in the engine-shaft is just as last reported; I think the lode will soon improve for ore as we sink, for there is a promising lode 4 fathoms to the west of the shaft. The men in the winch-shaft sunk 4 ft. 6 in. this week; the lode is just as last reported; the men in the end have not done anything scarcely this week, on account of its being full of stuff; the slope, west of the winch-shaft, is worth 6 cwt. of ore to the fm.; the slope, east of winch-shaft, is worth 8 cwt. of ore to the fm.; the slope, west of the eastern shaft, is worth 6 cwt. of ore per fm.

DEAN PRIOR AND BUCKFASTLEIGH.—Capt. H. Choake (June 28) reports—On Monday last, we set the engine-shaft to sink down for a 40 fm. level under the adit—the present depth then being 4 fms. 2 ft. below the 30; and, having then 5 fms. 4 ft. more to sink for a 10-ft. lift, the men have engaged to complete the sinking to the 40 fm. level, taking into account the fork, fixing the pitwork, &c., for the sum of 60*l.*, which will be carried into effect with all possible dispatch; the lode in the bottom level, east and west of the shaft, is large—a strong champion lode—composed of capel, spar, mundie, and iron, and spotted with ore. We have stopped driving the ends for the present, and have set to sink a winze in the bottom of the level—having a branch of ore gone down; in doing so, we shall be proving the lode to some extent, and it will also be in favour of the future proceedings for ventilation, &c.

DEVON AND COURTENAY.—Capt. N. Secombe (June 27) reports—In the end, driving west on the gossan lode, the lode is 1½ ft. wide, composed of mundie and spar, mixed with killas; there is at present more water issuing from the lode than since the commencement of our driving west of the cross-course; this I consider an indication of a favourable change about to take place in the lode. The lode in the winze, sinking in the bottom of the 40 fm. level, on the south lode, is 10 in. wide, composed of mundie, spar, and stones of ore—saving work. In the end, driving north on the slide, in the same level, to intersect the gossan lode, the ground continues favourable for driving. In the 60 fm. level, the men are driving through the cross-course, which in this place is large, to intersect the gossan lode, east of the cross-course.

EAST CROWDALE.—Capt. S. Paull (June 24) reports—The lode in the 58 west is upwards of 4 ft. wide, composed of capel, spar, mundie, flookan, and at times good stones of ore; on the whole, the lode in this place looks better than it has since it has been cut; and, without the least doubt, a few fathoms driving will discover a bunch of ore. The ground in the cross-cut north, in the 58 fm. level, is a hard close killas, intermixed with branches of spar, and is, at present, difficult to drive. The 47 fm. level is stopped for the present, and the men put to drive in the 58 fm. level east, the appearance of which I shall give you in my next report. The sumpmen belonging to the engine-shaft at Rix Hill, have been engaged collaring up on old men's shaft, on the back of the south lode, which is said to be sunk as deep as to within 2 fms. of the adit level; this shaft comes down to within 6 ft. of the tin ground, and will be very beneficial for ventilation, for taking off slopes, and for breaking the tin discovered. These men cannot at present work in the shaft, the water being so quick. The adit level, driving on the south lode at Rix Hill, continues to hold on good, is 6 ft. wide, composed of peach, priam, spar, and tin, and at present worth 30*l.* per fm. We broke a rock of tin in this end on Thursday last, supposed to be 7 cwt.; and, from the very favourable appearance of the lode, you may confidently expect a continuation of a rich course of tin in this place.

EXMOOR WHEEL ELIZA.—Capt. W. H. Whitford and Thomas Dunn (June 29) report—We thought we should have been in a position to report favourably of this mine to day, having, on Friday last, cut the capels of the great north lode; but we are sorry to inform you that, in consequence of more than ordinary rains having fallen on the surrounding hills, the water came down with the utmost violence, and washed down some of the leads, which prevented the engine from working effectually until last night. We hope the miners will resume their underground operations by to-morrow. If all be well, it is highly probable we shall next report on the nature, size, and qualities of the lode.

GREAT MICHEL CONSOLS.—Captain Thomas Richards (June 28) reports—The lode in the 45 fm. level, east of the sump winze, contains mundie, spar, and floor, with good stones of ore; in this level west the lode is without important alteration, containing mundie, spar, and capel, and in places producing stones of ore of good quality. In the 35 fm. level, west of the sump winze, the ground is more easy of progress; the lode still continues of much the same character, consisting of an abundance of very strong mundie, capel, and spar, with a small proportion of black and yellow ore.

HOLMBUSH.—Capt. William Lean (June 27) reports—The lode in the 132 fm. level, west of the diagonal shaft, is divided by several small cross-courses, between which the lode produces rich stones of yellow copper ore, mundie, and spar. The lode in the 120 fm. level south is 4 ft. wide, with favourable ground, and will produce 5*l.* worth of lead per fm.; the rise, in the back of this level, is communicated to the 110 fm. level, which leaves us in a position to set a new pit to follow the end southward; the ground, in the back of this level, now wrought on tribute, is yielding a fair quantity of lead ore. The lode in the 110 fm. level south is 4 ft. wide, composed of quartz and lead, worth 5*l.* per fm., and is for a few days suspended, and the men put to rise in the back of this level, to make a communication to the winze sunk below the 100, which was suspended last setting day, and each end set on tribute; we expect to hole it this week. The lode in the 100 fm. level south is 2½ ft. wide, composed of mundie, spar, and stones of lead; the Flap-jack lode, in the 110 fm. level east, is 2½ ft. wide, composed of mundie, spar, and stones of copper ore, in the midst of a favourable strata. The lode in the 90 fm. level south is 20 in. wide, composed of soft spar and stones of rich silver-lead ore.

KIRKCOUBRIGHTSHIRE.—The agents (June 24) report—In the 50 end, west of Stewart's shaft, the lode is large and kindly, with stones of lead; at the north lode west, in the same level, the lode is 20 in. wide, with a good branch of lead on the north wall. In the 40 end, west of Keith's, the lode is 30 in. wide, yielding a ton of lead per fm. half way up the end, and about a half ton in the back, with a fine appearance. In the 30 end, west of Keith's, the lode is large, yielding above a ton to the fathom; the lode has opened so much, that we have not got the north wall yet; it looks altogether like a new shoot, going away under the meadow land; in the 30 end, east of Stewart's, the lode is more compact—the ore part left to stand for the last few days; it does not appear to be worse than when last reported.

LAMHEROPE WHEEL MARIA.—Capt. John Tabb (June 26) reports—On Saturday, I suspended the driving the western end in the 30 fm. level, and Orchard's shaft, as this lode can be proved in the 40, and shall make preparations for sinking the engine-shaft in the beginning part of next week, at which time you will be in receipt of the amount of cash for the shaft to be sunk as deep as the 50; the engine-shaft's present depth is 37 fms. 3 ft.; to reach the 50 we shall have 12 fms. 3 ft., which will be set as per bargain. June 28.—Having nothing important to report on, I can only say, our operations are confined to the sinking of Davey's shaft, driving eastern end in the 30 fm. level, and making preparations for dropping lift to sink the engine-shaft. We have not taken down the lode going east for this past month.

LEWIS.—Capt. S. S. Neill (June 24) reports—The lode in the 70 west is 2 ft. wide, unproductive; the lode in the 70 west, on the south branch from

sump-whim shaft, is 2 in. wide, producing some good work for tin. The lode in the 60 east is 2 ft. wide—saving work for tin, and very promising; the lode in the 60 east, on the south branch, is small, yielding a small portion of tin—ground hard; the lode in the 60 west, on the south branch, is 6 ft. wide, worth 70*l.* per fm. The lode in the 50 east, on the south branch, is 4 in. wide, unproductive at present. The lode in the 40 east, on the south branch, is 1 in. wide, worth 7*l.* per fm. The south lode, in the 20 east, is 6 in. wide, worth 3*l.* per fm. The south lode, in the 10 east, is 8 in. wide, worth 6*l.* per fm.; the north lode, west from Bush shaft, is 14 in. wide, producing some good work for tin, and very kindly. The greater number of our tributaries are making fair wages at their different tributes.

SOUTH WHEEL MARIA.—Capt. George Francis (June 29) reports—The ground in the south cross-cut continues with little or no alteration—driving about 6 ft. a week. I suppose that we are already draining the south lode, as the water is daily increasing in the cross-cut, and the adit level is almost dry, which, a short time since, yielded a pretty large quantity of water; but, if the lode continues its underlie, as calculated on, 30 fms. above, there is yet from 8 to 10 fms. more to drive to intersect it.

SOUTH WHEEL TRELAWNY.—Captain W. Lean (June 24) reports—the ground in the engine-shaft, sinking below the 30 fm. level, is very favourable, and will be sunk deep enough next week to commence fixing the cistern, plunger-lift, &c.; the ground in the cross-cut, in the same level (west from the shaft) is as favourable as we can wish to see it within. The last week we have intersected several small branches of soft spar and priam, spotted with mundie, dipping west towards the lode. The water is just as usual—about 2 strokes per minute. We have also, within the last week, erected sheers and capstan, and removed the horse-whim, &c.

TRELEIGH CONSOLS.—Capt. William Symons (June 24) reports—The 120 fm. level, east of Christoe's, is driving in a south-east direction on the slide. Garden's shaft, below the 100, is sinking in the country; in the 100, west of Garden's, the lode is 3 ft. wide, with stones of ore only. In the 90 west we are cross-cutting south to cut the south part of the lode; in the 90, east of Garden's, we are now driving west from the cross-cut on the lode, which is 20 in. wide, worth 6*l.* per fm. In the 80, west of ditto, the lode is 18 in. wide, with occasional stones of ore. In the 70, west of ditto, the lode is about 2 ft. wide, with stones of ore, not to value. In the 60, west of ditto, the lode is 2 ft. wide, worth about 5*l.* per fm.; the winze is suspended—there is too much water to sink. In the 50, west of ditto, the lode is 20 in. wide, but little ore; in the adit east, on Wheel Parent, the lode is 3 ft. wide, with stones of ore, not to value; the cross-cut, north of engine-shaft, is to cut Wheel Orphan lode.

WHEEL SARAH.—Captain J. Spargo (June 29) reports—The ground in Maybrow's shaft is favourable for sinking; we are continually intersecting large branches of barytes, spotted with lead, dipping towards the lode; the men in the lobby are getting on very satisfactorily; we must force this with all speed, so as to unwater the shaft, which will come in about 2 fms. under its present depth. We have two men stoping in the back of the 9 fm. level; the lode is about 3 feet wide, producing good stones of lead. We are also about to commence the erection of a winch, which I purchased a few days since.

WHEEL TREHANE.—Capt. S. Richards (June 26) reports—Kelly's shaft is sunk below the 45 fm. level 10 fms. 1 ft., and a 55 fm. level cross-cut is driven towards the lode 1 fm. 4 ft. The ground from the shaft has been hard for driving, but is now favourable; and should it continue, as in the present end, I expect to see the lode early next week. We have nearly completed the dividing and easing of shaft to this level, for drawing the stuff with the winch, this, with sinking a little deeper for a fork, enlarging pit, &c., will be done without losing any time in driving in this level. In the 45 fm. level north, this lode is 2½ ft. wide, and worth $\frac{1}{2}$ ton of lead per fm.; it has produced about this quantity per fm. through the ground driven since last report. The lode in the slopes, in the back of this level, both north and south of cross-cut, is producing about 6 cwt. of lead per fm. The south end in this level is holed to the slopes brought in from the bottom of Philip's shaft; and the ground south of this is now being stoped by the men who were employed in driving the end. We have sunk a winze near the boundary, from the bottom of the south slopes, as deep as the 45 fm. level, where we are stoped by water; and in stoping northward from the same, the lode has greatly improved, and is producing $\frac{1}{2}$ tons of lead per fm. The slopes in the bottom and back of the 30 fm. level north are yielding some tolerably good work. In the cross-cut driving west in this level (30), there is no important alteration; the ground is clean killas, and favourable for driving.

WHEEL VINCENT.—Capt. J. Spargo reports—We have commenced driving the south cross-cut; we have about 10 fms. to drive, so as to cut the south lode, which will come in about 10 fms. deep, under the old men's workings. We have also cleared out the deep adit level, and driven on the north lode; this, as well as our other operations, I shall be enabled to report on more fully next week.

WHEEL TRELAWNY.—Capt. John Bryant (June 27) reports—Philip's shaft is sunk 4 fms. below the 62 fm. level, where we have clean killas ground, favourable for sinking; if this ground continues, I expect to get the shaft to the 72 fm. level by the end of August. The lode in the 62 fm. level south is 1 ft. wide, and worth 12*l.* per fm.; in this level north the lode is 3 ft. wide, composed of can, spar, capel, and lead, worth 7*l.* per fm.; the same will apply to the rise in the back of this level, where the ground is more favourable for working than it has been. The lode in the 52 north is worth 7*l.* per fm.; in this level south the lode is 3 ft. wide, composed of horn-spar, can, and lead, worth 6*l.* per fm.; in sinking the winze under this level, the lode is not so good as when last reported—worth at present about 14*l.* per fm. The lode in the 42 fm. level north is still a good size, and worth 7*l.* per fm. The slopes throughout the mine are yielding a fair quantity of ore. Trelawny's shaftmen are putting in penthouse, and doing other work, preparatory to sinking under the 52 fm. level. The 52 cross-cut west is driven 4 fms. from the shaft; the end is eased for driving since my last report; and, if the ground proves favourable, we expect to cut the lode in the early part of next month. There is no change of importance in the 22 cross-cut east, since it was last reported on. At the north mine, the lode in the 30 fathom level, north of Smith's shaft, is 8 feet wide, worth 5*l.* per fm.; the ground is good for driving, set at 25s. per fathom. We have commenced sinking Smith's shaft under the 30 fm. level, on the course of the lode, which is yielding good stones of rich silver-lead ore.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—Gongo Soco, April 22.—We have now at Gongo only three miners—two at the stamps, and a third to assist in case of illness of either of the other two. This third man is chiefly employed in directing the labourers who are scraping the surface; we are not, therefore, likely to have anything further to report concerning the mine. At Bannan, Walker's shaft has penetrated the upper beds of the jacutinga, but the water has completely overcome our pumps. A 14-inch one has been put in place of a 12-inch, which has enabled us to do a little more than we otherwise could have done; but this additional burthen on the water-wheel, already tasked to the extent of its power, causes it to work so slowly, that we can work in the bottom of the shaft only occasionally. In the adit shaft we have encountered the former owners' old workings on the vein near their big pump—the bottom is still lower (two or three feet) than our level. Towards Walker's, the level from Thomas's advances rapidly: we had commenced driving to meet it, but the increase of water threatened our already overpowered pumps at Walker's shaft, and it was, therefore, discontinued. From Walker's downwards the ground has very greatly improved, and the lower end coming towards it is also somewhat better. Hollingsworth's shaft, and the shallow adit towards it, go on very well; in the latter we have seen several veins, but one only showed gold, and that very trifling. The saw-mill is at work, and the little difficulties mentioned in the mine report have been overcome. All our artificers are now actively engaged on the rods between the new wheel and Walker's shaft, but little is being done to the houses, as the machinery now occupies all our thoughts. Our troop will leave for Rio in about 10 days, to fetch the pumps and the new miners, and we shall send by it the little gold we may have obtained.

Mosses, Mackay, Miller, and Co., in a letter to the board, dated Rio, May 11, state that they look hourly for the arrival of the troop sent down by Mr. Henwood for the pumps. There have reached Falmouth, per *Cruze* packet, lbs. 55 9 18 12 of gold dust, value about 2500*l.* Another remittance, of about 20 lbs. weight is expected shortly.

Gold workings at Gongo Soco from the 11th to 22d April.—lbs. 4 16 0.

NATIONAL BRAZILIAN MINES.—Cocoes, April 24.—Production of the mines for 10 days, under the new system of working, with increased force:—

| | | | | |
|--|--------|---|---|---|
| Cocoes | Mts. 4 | 0 | 0 | 6 |
| Culaba (with a diminished force) | 3 | 0 | 1 | 5 |

ST. JOHN DEL REY MINES.—Morro Velho, April 18.—Gold extracted to date, 5132 onitavas, from 227 35 cubic feet of sand=22 57 cits. per cubic foot.

Stamps working during 17 days—average 64 56 heads, or 71 heads during 15 46 days. The supply of stone is abundant; and the rejection of inferior ore is continuing with so much spirit, as to neutralise, in some degree, the effect of our mishaps at the beginning of the month. We are now working overtime on the spalling-floor, in order to provide, as far as we can, against the inconvenience which would otherwise be occasioned, to no trifling extent, by the Easter holidays, now close at hand. In the mine every thing is going on well. The same may be said of the new surface works: viz.: the new water-course, the new stamps, the new 30-ft. wheel for the amalgamation-house, the new hospital, and new houses for the blacks—which are all progressing in a satisfactory manner.

April 28.—Gold extracted to date, 10,030 onitavas, from 468 cubic feet of sand=21 45 cits. per cubic foot.

Stamps working 17 days—65 87 heads; or 71 heads, averaging 25 05 days. The supply of ore has been much affected by the Easter holidays.

SOUTH WHEEL BETSEY.—At a meeting of adventurers, held the 15th April, it was resolved, that a call be made of 2s. 6d. per share, to be paid forthwith.—On the 17th June, a meeting of shareholders was held at Mary Tavy, when, it having been reported by the company's agent that the cross-cut towards the lode is progressing satisfactorily, it was resolved, that the same be continued with all possible energy and dispatch, there being, according to estimate, about 6 fms. more to drive for intersection of the lode. The accounts showing requirement of a further call for such object, a call was made of 2s. 6d. per share, payable to the purser on or before 3d July next; and the purser was instructed to enforce payment of arrears of last call. [We have not received the statement of accounts and agent's report, presented at the meeting, as expected, but we presume the omission was unintentional. Absent shareholders are at all times anxious to learn how their money is expended, as well as to know the progress of operations at the mine.]

MINING NOTABILLIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

SOUTH WHEAL BETSEY.—The ground in both cross-cuts is much softer, and should the ground continue as favourably as at present, we shall cut the south lode in about a fortnight.

WHEAL TREGORDAN.—Six of us were at the above mine yesterday, and minutely examined all particulars there, and have come to a conclusion to erect a small steam-engine immediately. We consider the lode in the shaft to be worth at least 10s. per ton, which can be worked, including timber, at about 5s. per ton; the lode is looking much better than I expected to find it, and, if it continues down and in length (of which from present appearances there is no doubt) we shall return ores as soon as we can open on the lode.—June 28.

ASTURIAN MINING COMPANY.

The annual general meeting of shareholders in this company was held at the offices, Austinfriars, yesterday.

S. P. PRATT, Esq., in the chair.

Mr. MACKENZIE (the secretary) read the advertisement convening the meeting, and the following directors' report:—

REPORT.

The directors have delayed this annual meeting of the registered shareholders to the latest period, that they might be enabled to lay before them a more exact statement of the present position of the company, now that the works are nearly completed. It may, however, be desirable, in the first place, to state some of the causes of the delays which have so long disappointed their expectations and those of the shareholders. An unfavourable climate, which, for several months in the year, almost entirely prevents, or limits, out-door work, has been often mentioned, together with the difficulties attending operations in a country almost a stranger to the sort of works undertaken by the company. These hindrances would, however, have been overcome by this time, and the directors would, no doubt, have had it in their power to announce a large production of iron, and probably its sale, but for the unfortunate error committed by our late manager.

At the last annual meeting, confident expectations were entertained that the produce of the blast-furnace, then just blown in, and that from the quicksilver, would have enabled the directors to have declared a dividend before the end of the year: they relied upon a statement made by Mr. Manby, that he had secured an inexhaustible supply of good iron ore, near the works, at a cheap rate, and had made a contract for its regular delivery. The furnace was blown in, but was soon afterwards extinguished without producing any iron. Mr. Manby then left the management, and was succeeded by Mr. Lambert, our present manager, who soon ascertained that the failure was not owing to the quality of the coke, to which it had been attributed, but to the bad quality of the ore, which had been provided, at considerable cost of road-making, &c., by Mr. Manby, and which was of no value, as used alone. It became necessary to seek for other mines, which necessarily required much time to ensure a sufficient supply for the furnace, which was so much damaged by the trials with the inferior ore, that a considerable expense and loss of time was incurred in making it fit for a new attempt. It was also necessary to make experiments upon the various kinds of ore found within reach of the works; these, and other causes, delayed our operations a whole year, but the result has been most satisfactory—the furnace has been again in operation for six weeks, the quantity and quality continually increasing. The last report states, that iron suitable for all purposes is daily running from the furnace.

With respect to the quicksilver, although the statement made last year of its expected produce has not yet been realised, the delay has arisen not from an incorrect opinion of its value, but from the practical difficulty attending its reduction. The average value of our cinnabar ore is greater than that of Almaden, which supplies the greatest part of all the quicksilver used in commerce; but it is alloyed with a large quantity of arsenic, which renders its distillation difficult and dangerous to the workmen. It has, therefore, been necessary to try many experiments, and to use great caution as to the best means to render the produce of the mine available. A large furnace has been constructed, to enable us to distill large quantities of the inferior ore extracted from the mine. Some trials have been made, which, although not quite satisfactory, will yet considerably increase our power of reduction. The mine itself gives every prospect of an abundant supply of ore; and when the present difficulties attending its distillation are overcome, it will realise our most sanguine expectations. True, although another year's delay has prevented the directors from making any return to the shareholders for their investments, yet it must be evident, that their well-grounded hopes continue, and will eventually produce good results. It must be borne in mind, that although no dividend has been declared, yet a considerable sum, during the last 10 months, has been actually received from the Spanish Government for mercury delivered to it, and this amount has been applied to the current expenses of the works, in bringing them into their position of active work, which could not have been accomplished without this aid, unless a call to that amount had been made upon the shareholders.

The mill is so far completed as to enable us to make iron of various sorts; and, as we have a sufficient supply of pig-iron from our own furnace, the only cause of delay has been the difficulty of procuring proper workmen. It is at all times desirable to employ Spanish workmen, when they are capable; and this is more particularly the case under the present political circumstances—but some delay has occurred in procuring workmen from the iron-works of the south of Spain. Several are now, however, on their way to the works, and will be employed immediately on their arrival. Having now succeeded so well with the one blast-furnace, it will be desirable to construct a second; and as soon as a sufficient supply of good ore to keep it going has been secured, for a second furnace will considerably reduce the price of the iron, as no additional blast will be required. Measures are being taken to form connections in the different parts of Spain for the sale of iron; but, as this is necessarily the work of time, some period must elapse before sales become considerable. As soon, however, as it becomes known that we can sell iron at lower prices than any other Spanish work, and as we are protected by high duties from foreign competition, the result cannot be long doubtful. Sales have been effected in Oviedo for various castings, averaging near 2½ per ton—thus realising as large a profit as our most sanguine expectations could lead us to expect.

The sales of coke and coal from Santo Firme have been much less than was anticipated; this has arisen from the diminished export from Aviles, in consequence of the injury the port has sustained, and from the want of a good road to the only other available port of Gijon. We have hopes that a short railroad of eight miles will, ere long, remedy this difficulty; every means are being adopted to extend the sales in the country. The position of the company is no longer one of doubt. The returns from the works show that 250 tons of excellent iron have been made in the first six weeks, at a cost that will defy competition, which cost does not exceed that of some of the largest works in Wales and Staffordshire—giving us confidence in our manager's declaration, that the furnace will produce 70 tons per week before long. Taking the average selling price of pig-iron in Spain at 10s., we leave to the shareholders to draw their own inferences of the profits now realising.

At the cinnabar mine, there is a quantity of ore broken out, ready for distillation, of 600 tons. The average yield of a good workman has been 15 per cent; calculating this ore at 5 per cent, the produce will be 30 tons of mercury. Under such circumstances, the directors would have no hesitation in declaring a dividend, but for the disappointments they have already experienced. But the shareholders can now judge for themselves of the probability of a speedy return being made to them for their investments.

A meeting of shareholders, in pursuance of a resolution of the Spanish Government, has been held in Oviedo; from which a petition was addressed to the Government, requesting the Royal authority for the continuance of the company, to which we anticipate but little opposition.

One of the auditors, Mr. Alexander Wilson, retires by rotation; but, being eligible for re-election, he offers himself accordingly.

The annual balance-sheet, verified by the auditors, for the financial year ending the 30th April last, lies on the table.

A private report to the directors was also read from Mr. Colquhoun, who has been 12 months in Spain, attending to the interests of the company, in which he states, that it had been only by the most active attention and perseverance that the company had been saved from being broken up. He had watched the progress of Mr. Manby for two months, but all his trials were of no avail, and as soon as possible he was replaced by Mr. Lambert. In consequence of a deep fall of snow, many months' delay took place before they could search for other deposits of ironstone, which, however, was at length effected. The machinery which arrived in the *Pearl* could not be made available, as the Government had imposed a duty of 30 per cent. on it, which was equal to 100 per cent. in England—it was, therefore, discharged in bond, until they could apply for redress, which was at length obtained, by the duty being taken off. The alcalde of the district had tried all his efforts to injure them—he had stopped their works, several hundred men had been discharged, and he had nearly ruined them; their letters were never received regularly, and supplies thus stopped; but, after three journeys to Madrid, and the assistance of Sir H. L. Bulwer and others, they eventually triumphed, and the alcalde declared liable for all the damage. Mr. Lambert had succeeded in blowing in two furnaces, and discovering an inexhaustible supply of excellent ore; they were now producing plenty of iron of first-rate quality, and they only wanted a market. The average produce of mercury was 15 per cent.; they had six retorts at work, and had made considerable improvements in the production process.

From the statement of accounts, it appeared that the receipts had been 153,834l. 14s. 9d.; and expenditure, 146,516l. 11s. 3d., leaving a balance of 6818l. 3s. 6d., consisting of debts due, calls unpaid, and 128l. 5s. 3d. of cash.

Mr. SCALE, one of the directors, made some observations as a practical iron-master and coalowner on their prospects; from the costs furnished him by Mr. Lambert, he found they could make pig-iron as low as any firm in Wales or Staffordshire, and could produce bar or rolled iron at a cost of 7l. per ton. Now, as to a market, he found there were 7000 tons of iron imported annually into Spain at a duty of 16s. Here then was their market, which they could supply so much cheaper, at a great profit per ton; and it was evident, had they succeeded at first, they should before this have paid large dividends on iron alone; and there was no question as to their present capability of returning 70 tons per week. In their quicksilver they had great resources, and their coal was most satisfactory, and could be raised at 3s. per ton. With respect to the castings they had had to execute, the parties had paid for models, carriage, and every expense, and 20l. per ton for the metal.

The chairman, Mr. Henning, Mr. Knill, and other directors, entered into a description of the difficulties they had to encounter with their present prospects, which are assuredly the most cheering of the company which have yet appeared; but the lateness of the week precludes us from giving the discussion at length. Several gentlemen present attempted to lay blame and want of caution to the directors, who, however, showed that they had been governed by peculiar circumstances, and they had seized every opportunity for the advancement of the interests of the company.

The report was unanimously adopted. Mr. Wilson (an auditor), who retired by rotation, was re-elected; and a vote of thanks having been passed to the chairman, the meeting separated.

BOLANOS MINING COMPANY.

The annual meeting of shareholders in this company was held at the offices, Duke-street, Adelphi, on Wednesday last, the 28th June.

Sir ROBERT PEARCE, Bart., in the chair.

The SECRETARY having read the notice convening the meeting, the CHAIRMAN stated, that three directors—Messrs. Wray, Kerrison, and Skinner—went out of office by rotation, and A. J. Valpy, Esq., as auditor, but were eligible for re-election, and offered themselves accordingly; and these gentlemen having been unanimously re-elected, the secretary proceeded to read the report of the directors, which stated that, in the present prospects of the company, there was ample reason to be satisfied; their hopes, for the future, which mainly rested on the success of El Boto Mine, had suffered no change; and although some retardation had taken place, in consequence of the increase of water, they felt satisfied the company was now operating on a valuable set of mines. They had besides numerous difficulties to encounter, arising principally from the war in Mexico; quicksilver reaching a price unknown before—the enormous cost of iron, and other metals and stores—and the high duty on the silver produced, all combined as a drawback to their efforts. San Francisco de Paula had been abandoned. At Celestine, they were now only clearing out the ore broken in the several levels, and, when completed, the mine would be delivered to the owners. Of their original mines, Loreto was the only one prosecuted, where, in the shaft of San Genaro, cross-cutting to Malancho, a vein had been met with, showing good indications, and which could be followed up at little expense. The El Boto Mine, since the middle of April last, had produced 3000 cargas per week, or, in five months, 61,723 cargas of ore, of good quality. Since then, however, the water had been a considerable hindrance, and, from the difficulty of drainage, had lessened the quantity raised. It was a promising feature that the ore improved in depth—for the ley was 7-88 marks per 20 quintals; the same vein producing before only 5-6 marks per 20 quintals—an increase in value on the quantity raised amounting to £200,000. It was proposed to deepen San Genaro shaft 20 varas and cross-cut to the vein—while it was expected an engine from Bolanos would keep the water below the bottom levels from San Fernando shaft. Every part of the engine was on the mine; and, on sinking the shaft, the pitwork would be immediately fixed, and engine erected, during the time of driving the cross-cut. From the accounts, it appeared, that the receipts for the twelve months, ended 31st March last, had been 8229l. 10s. 11d.; and expenditure, 7805l. 9s. 8d.—leaving balance in hand of 424l. 1s. 3d. Notwithstanding the small capital employed, the high price of stores, &c., the prospects of El Boto were highly encouraging; the mine already had produced three-quarters of the capital employed, leaving a great portion of ore in sight. There was only one lode hitherto explored; while there were several others in the sett equally promising, and two which would, perhaps, prove equal to any in Zacatecas. The cause of the small balances in hand in England was, the difficulties of obtaining remittances from Mexico, either in silver or bills.

A vote of thanks having been passed to the chairman and directors, the meeting separated.

REAL DEL MONTE MINING COMPANY.

The annual general meeting of shareholders in this company was held at the offices, Duke-street, Adelphi, on Wednesday last, the 24th June.

Sir ROBERT PEARCE, Bart., in the chair.

Mr. PHILLIPS (the secretary) having read the notice convening the meeting, the CHAIRMAN announced that A. J. Valpy, J. Brown, and H. Twiss, Esqs., went out of office by rotation; that the two latter gentlemen only offered themselves for re-election, and that their late manager (Mr. Taylor) had offered himself in the room of Mr. Valpy. He was sorry to be obliged to acknowledge, that he now had but little hopes of this concern; with their crippled means and the present state of things, it would be folly to think of raising more capital; he had been always most sanguine of this property, but a combination of untoward events had prevented their carrying out measures which would have enabled them to drain the mine, and prove its resources; and he had no doubt now, that if another company took it up, and employed sufficient capital, it would yet prove a valuable undertaking. Under these cheerless circumstances, it gave him great pleasure to propose Mr. Taylor, who was willing to struggle to the last, and to take a share of those extra cares and responsibilities which ever attend a concern like this on the point of winding up. J. Brown, H. Twiss, and J. Taylor, Esqs., were then elected directors; and S. Cooper, Esq., was re-elected an auditor.—The SECRETARY then read the following directors' report:—

The proprietors in general are, no doubt, prepared to expect, in the report which is now to be laid before them, an unfavourable view of the circumstances and prospects of the company. A combination of adverse circumstances, unforeseen and uncontrollable, has so much affected the funds of the company, as to render necessary prompt measures of retrenchment, probably involving the suspension of all works that are unproductive of profit.

The directors proceed to state briefly those circumstances which have produced this change in the prospects of the company. Great reliance was placed on the advantages to be derived from an extension of the barrel and other processes to the reduction of the poorer class of silver ores, which can be produced in great abundance, of a ley of 5 or 6 mares per month. Machinery adapted to the purpose was provided, and the repairs of the hacienda were proceeded with; but the war in Mexico preventing any disembarkation on the coast, the machinery was detained in the Havanna and in England for many months, so as to defeat the object in view, and causing the sacrifice of a considerable outlay. The erection of the barrels at Sanchez hacienda was also much delayed, by the necessity of making many castings on the spot, and by the unavoidable employment of artisans on the repairs rendered necessary by accidents to the steam-engines noticed hereafter. The continuance of the war caused also an enhancement of prices, much difficulty in obtaining quicksilver, and great insecurity of property—all tending to make an increase of expenditure unavoidable, and to lessen the returns of silver, for want of materials essential in the reduction of the ores.

The expenditure of the hacienda states, in one of his monthly reports, that the deficiency of quicksilver caused a difference in a single month's produce of \$10,000, and this at a time when 200 bottles belonging to the company were at Vera Cruz, waiting means of transport. But the greatest detriment has been from the remarkable increase of water in the mines. In May, 1846, the duty-paper reported the quantity of water raised to be 2643 gallons per minute, and the engines were then considered overworked. The next and last duty-paper received, was for December, 1847, when the quantity of water had so increased to 3145 gallons per minute, causing the sacrifice of a considerable sum, in the interval, rendered necessary several alterations and removals of engines, at considerable expense and inconvenience. Moreover, repeated and serious accidents to the steam-engines have occurred, by which the drainage has been so much interrupted as to prevent access to those parts of the mines which were most to be relied upon for profitable working. It was to obviate these fatal interruptions to regular working, that the 85-in. cylinder engine, mentioned in the last report, was ordered, and which would have been sent to Mexico, had the country, at that time, been in a state of tranquillity. The circumstances of the company, which now forbid the attempt. The engine was ordered in 1846, in which year there was a profit of about \$50,000, and every appearance of a continuance of profits, which would, no doubt, have accrued, but for the difficulties before-mentioned. Those fair prospects have, however, proved fallacious, and a period of anxiety and loss has succeeded. The result of last year's working has been a loss of \$114,938—of which, however, it is proper to state that the sum of \$45,408 was incurred on account of extra works.

The directors regret to add, that a further loss of \$38,763 is shown on the accounts for the first quarter of the present year, and that little prospect of improvement is held out for several months to come. It will readily be seen, that the funds in the hands of the directors cannot avail to repair these losses. Seeing this, and, further, considering that any attempt to raise new capital would probably be unsuccessful, the directors have already sent out very positive instructions to their commissioners to suspend the drainage of the deep workings, and reduce the establishment accordingly, unless means can be devised, by which the object in view can be attained, and the sacrifice of a considerable sum, by extracting ores from the points which may be accessible, and by exercising rigid economy in the expenditure, profits may yet be realised. But, if this plan cannot be successfully pursued, the most prudent course may be, that this company should endeavour to dispose of the concern, which undoubtedly offers great advantages to those who would provide the means of effectively working it. The stores and moveable articles on the mines, of which an inventory has lately been received, are valued at a large sum of money, and are of course available, should the company, in case of their continuing the workings, or for any purchasers who may be disposed to take the concern of the company's hands.

The directors have to announce that, having accepted the resignation of Mr. W. Rule in the latter part of last year, they offered the situation of commissioner to Mr. J. H. Buchan, whose high character and long experience in Mexico pointed him out as a suitable person for the appointment, and this offer they have the satisfaction to report that he has accepted. The powers of the commissioner were, in the interval, entrusted to Messrs. Brechely and Woodfield, to whom the directors award great praise for their candid statements respecting the concern, and for their active attention to its interests at a very critical period.

In concluding this report, the directors must express their conviction, that, notwithstanding the unsuccessful results of all their efforts to place this company's affairs on a sound and satisfactory footing, there still remain the elements of a great and profitable concern. The mine agents' reports, lately received, confirm the opinion, that very large quantities of ore, of a ley of 5 to 6 mares per month, may be obtained, which, although of an inferior quality, might still be made remunerative by judicious arrangements, combined with the advantages of improved reduction processes, and the recent fall in the price of quicksilver. Ores of a better class may likewise still be raised from above the water-level; and, with such an addition to the drainage-power as that which the 85-in. engine would afford, there can be no doubt that a vigorous application of new capital would restore the prosperity of the concern.

From the statement of accounts, it appeared that the balance in hand, from last account, was 793l. 14s. 8d.; proceeds of bills from Mexico, 16,000l.; Exchequer Bills and stock sold and interest, 4619l. 13s. 8d.; for quicksilver lost in the *Tweed*, 850l.; sundries, 54l. 9s. = 23,483l. 17s. 4d.—By paid in London on account of officers in Mexico, goods shipped, insurance, &c., 14,171l. 10s. 2d.; on account of new steam-engine, 4052l. 0s. 7d.; paid for 2000l. Exchequer Bills, 2014l. 13s. 4d.; London management, including directors, secretary, clerks, office rent and charges, messenger and housekeeper, postage, printing, stationery, &c., 1953l. 7s. 4d.; leaving a balance in hand of 7467l. 5s. 11d. The entire expenditure of the company, from the commencement, has been 1,230,687l. 19s. 9d., and there is now a balance in hand of 5399l. 17s. 3d. in 8½ per Cent. Stock, bills receivable, and cash in London, and in stores, cash, and silver bars in Mexico, \$164,301.

The CHAIRMAN said, he had no doubt but that under their deed they had

the power to take any steps, which to them seemed advisable for the welfare of the company; but as it was a matter of considerable importance, the directors wished to have explicit power from the meeting to enable them to sell the property, and wind up, if such appeared inevitable; and a resolution was accordingly passed to the effect, that the directors be authorised to sell all, or any part of the property, or take any other steps, which, in their judgment, may appear to be for the interest of the company.

A long conversation ensued on the remote chance of profit on confined workings, the value of the plant, machinery, property in hand, &c., when a vote of thanks was passed to the chairman and directors, to which Sir R. PEARCE replied, and the meeting separated.

CALLINGTON MINES COMPANY.

At a quarterly special general meeting of shareholders in this company, held at the offices, Finsbury-square, London, on Wednesday, the 28th June,

RICHARD HODGSON, Esq., in the chair,

After the usual preliminaries, the following report was read:—

DIRECTORS' REPORT.

GENTLEMEN.—The commercial depression of the past six months having been peculiarly severe in its effects upon the progress of mining enterprise, the directors have been compelled, in consequence, to realise their ores, both lead and copper, at prices hitherto unknown; and the profits of the company have thus been affected to an extent which could not have been anticipated. Notwithstanding these depressing circumstances, this company has made steady progress in its various departments, and the several operations have been generally attended with the results anticipated. A particularised statement will be furnished by the local agent's report of all the workings, since the annual meeting. The development of the Kelly Bray lode manifests results certainly encouraging. The expenditure is trifling, compared with the returns, which are increasing monthly. An improvement has taken place in the 50 fm. level, the particulars of which will be found in the agent's report; and when the 90 fm. level is driven through, and clear of the great cross-course, increased returns and larger profits may be expected. Active exertions are being made to maintain the returns from the lead mine, which, with the increased samplings of copper ores, will yield, it is anticipated, profitable results. The statement of accounts now to be submitted, shows that the estimated progress of the company in its pecuniary circumstances is being realised, so far as the state of the metal market will allow—the returns of copper ore being, for the past three months, 942l. 6s. 5d. more than the returns for the preceding three months, while the cost has been positively decreased (deducting the engine) to the amount of 64l. These facts prove to demonstration that, although for the depressing influences alluded to, the mine has fully realised the anticipations previously expressed; and, had a fair and remunerative price been given for the ores, a much larger credit balance would now appear in favour of the company, and the directors would have had the satisfaction of announcing a dividend for distribution.

The following report from Capt. J. T. Phillips was also read:—

Callington Mines, June 26.—I beg to inform you, that Kelly Bray engine-shaft is now about 5 fms. below the 35 fm. level; the ground is favourable for sinking. In the 25 fm. level west the lode is 4 ft. wide, with occasional stores of copper ore; this end has been suspended for the time, and the men removed to complete the winze to the 35 fm. level, which we sunk 5 fms. below the 25 last summer. The engine being fixed, and in course for working, a decrease has taken place in our expenditure in this part of the mine, the different surface operations in connection with it being also in a state of forwardness. In the 50 fm. level east, now driving towards this point, I am happy to say an improvement has taken place; the lode is 4 ft. wide, 3 ft. of it intermixed with much manganese ore—saving work; the lode is of much the same character here as we find it near the cross-course, about 10 fms. below this place. In the 70 fm. level, the south branch we have driven on appears to be almost divided away. We have removed the men to the former end, where the lode is from 2½ to 3 ft. wide, very regular, composed of quartz and capel, intermixed with muddle. In the winze, sinking below this level, the lode is 5 ft. wide; although not a rich course of ores, 2 ft. of it is good saving work; the ground is rather hard. In the stopes, the lode is from 4 to 12 ft. wide, and produces, on an average, about 5 tons of ore per fathom. The average value of the whole of the ground we have spent on this lode, to the east of the great course—that is, the 50 and 70 fm. levels, with the stopes in the back of the latter—is 16l. per fm. In the 90 fm. level east, the ground is rather hard for driving; agreeable to our calculations, the great cross-course is 9 ft. ahead of us. We expect the approaching quarter will bring both this and the 50 fm. level into a profitable state of working, so that we shall not be dependent on one level only, as has been, and is now, the case for our returns of copper ore. We also expect an increase from our operations at Kelly Bray. We have two pitches working here at 10s. in 1l. In the north engine-shaft, the ground is rather hard; we have sunk about 4 fathoms since we commenced below the 100 fathom level; in this level south no alteration has taken place, as we are not yet through the hard bar of ground. In the 90 fathom level south, we are opening ground that will work at a moderate tribute. In the south mine, in the 135 fathom level, both north and south, the lode has not proved equal to our expectations; in the north end it is nearly 1 ft. wide, composed of fluor-spar, intermixed with silver-lead ore; in the 119 fm. level north the lode has been rather poor for some time past; we expect to cut the elvans shortly, and look forward to an improvement here; in the south end the lode is small, composed of carbonate of iron and silver-lead ores. In the 100 fm. level north we have driven through a promising vein of ground, and calculate on the backs being taken away at a very moderate tribute; the lode in the present end is rather small, producing silver-lead ores; the ground is of a conical character. In the 90 fm. level, the ground through which we have driven work at a moderate tribute. We are preparing for, and calculate on, sampling 100 tons of copper ore in the course of a few days. The last parcel of silver-lead ore was much smaller than we had previously calculated on. Our returns from the stamping department have been much less than usual. Owing to the want of water making a portion of the deficiency, the work and attire, drawing from the eastern ground, occupies the winding-engine a larger portion of her time. Some alterations will now be made as shall have a tendency to increase the returns of silver-lead ores; and our parcels for the future will be larger—whilst our present prospects lead us to expect increased samplings of copper ores; at the same time, I would beg to observe, that every reduction that can possibly be made in the expenditure, consistent with the proper working of the mine, shall be fully carried out.

Statement of Accounts for Three Months, ending March, 1848.

| Dr. | | EXPENDITURE. | |
|---|------------|--------------|------------|
| Amount of January cost, including Kelly Bray | £2056 17 3 | | |
| Do February cost, including ditto | 1883 11 8 | | |
| Ditto March cost, including ditto | 3023 5 7 | 5963 14 6 | |
| Ditto Kelly Bray engine | | | 1500 0 0 |
| Ditto cost of Rossage, 13l. 4s. 9d.; ditto interest and discount, 80l. 14s. 2d. | | | 93 18 11 |
| Disbursements:—Directors' attendances, 62l. 10s.; London management, 80l.; auditing (12 months), 21l.; petty cash (from June, 1847), 21l. 3s. 6d. | | | 184 13 6 |
| Balance | | | 897 11 2 |
| | | | £3809 18 1 |
| Cr. | | RECEIPTS. | |
| Silver-lead ore—January returns | £1775 9 5 | | |
| Do February ditto | 1729 13 8 | | |
| Do March ditto | 1499 8 11 | 5004 11 6 | |
| Copper ore—January returns | £252 17 9 | | |
| Do February ditto | 689 13 8 | | |
| Do March ditto (in part) | 485 18 4 | 4398 9 9 | |
| Kelly Bray—January cost | £430 6 1 | | |
| Do February ditto, including engine (1500l.) | 1821 1 9 | | |
| Do March ditto | 385 7 4 | | |
| | | | £2656 15 2 |
| Less copper ore sold | 1398 9 9 | 1258 5 5 | |
| Balance from last account | | | 688 11 5 |
| | | | £3809 18 1 |

Balance, 597l. 11s. 2d.; copper ore, 650l.; subist (March), 286l.; reserved fund, being 679l. 13s. 6d.; 3 per Cent. Consols, 619l. 1s. 5d.

The CHAIRMAN, in commenting upon the reports and accounts, expressed the regret which he and the other directors felt at the diminished and unsatisfactory price obtained for the ore, to which cause alone was to be attributed the absence of dividends—the mine having maintained her richly productive character. This would be convincingly shown upon a particular reference to the agent's report; and, with respect to Kelly Bray, the result shown by the last three months' working was certainly most propitious—the cost for the three months being 64l. less than for the three preceding months, and the returns of copper having increased to the amount of 850l.

Mr. RICHARD JAMES, having moved that the report and accounts be received, requested to be informed whether the absence of a dividend was entirely owing to the cause stated by the chairman?—The CHAIRMAN stated, that the fact was demonstrably certain.

Mr. H. S. HAMMOND requested the attention of the directors and the meeting to the reserve fund of the company, which he considered should be applied to the purposes of the mine, and maintained the necessity of this step upon the principle of economy—inasmuch as it would save the company some 10l. per annum. He, as one of the auditors, contended that this reserve fund could be more usefully employed at the company's bankers than in the 3 per Cent. Consols.—Mr. JAMES certainly understood, at the last meeting, that this course would be adopted.

Mr. TYRRE (one of the directors) begged to inform Mr. Hammond, that the difference which he was contending for was about 6l. per annum. Besides which, a large loss would arise upon selling the stocks at the present price.

The CHAIRMAN, in answer to Mr. Hammond and Mr. James, observed, that at the last meeting this question had been left to the directors, and he had frequently mooted the question at the board meetings. Mr. Field, however, earnestly contended for the maintenance of the reserve fund, upon the ground of precedent, principle, and expediency; he could, however, again bring it under the notice of the committee.

Mr. STAINSBY explained, that a reserve fund was part of the company's constitution.

Mr. HAMMOND had no doubt the directors would deal with the matter judiciously and beneficially, but he mooted it upon the principle of economy; he would, however, confidently leave the matter to the directors.

Mr. P. N. JOHNSON, upon the subject of economy, begged to assure the honourable proprietors that he and the chairman had, for some time, given that question the most anxious attention; every department of labour, every item of expenditure, had been scrutinised, and every possible reduction had been made. Upon the general question of the mines' condition, he coincided with the chairman's statement.

In reply to a question by Mr. Mackay, the CHAIRMAN stated, that if the lode proved good in the 90 fm. level, dividends might be soon expected. The resolutions will be found in our advertising columns.

NISTER DALE IRON COMPANY.

An extraordinary general meeting of shareholders was held on Monday last, the 26th June, at the offices of the company, Old Jewry Chambers—S. P. FRATT, Esq., in the chair. The object of the meeting having been explained by the chairman, it was unanimously resolved to accept the offer made by the proprietors of the Eschweiler Works, to confine the operations of the amalgamated companies to Germany alone, and to dispose of the iron and steel-works in Yorkshire.

From what was subsequently communicated to us, we understand that the united company will be in a position to supply, at lower prices than any other German iron-works, the extraordinary increasing demand for iron in that country—viz.: pig-iron, rails, boiler plate; in fact, every description of iron required for railroads. The capabilities of the two establishments will exceed 600 tons of finished iron per week. We extract, from a clever work on the *Industry of the Rhine*, the following description of the respective works, by an Englishman; and there is little doubt, we should imagine, that the enterprising shareholders of the Nister Dale Company will, ere long, reap their reward, especially as their new colleagues are acknowledged to be the first manufacturers in Germany, and are, in that country, what Messrs. Crawshaw and Messrs. Bailey's are in Great Britain.

From Holsappel the distance is not great to the valley of the Nister, where, near the town of Hachenburg, the Nisterdale Company's works are erected. The town, which was formerly the residence of one of the branches of the Nassau family, has a massive, but deserted, castle, perched upon a precipitous eminence that looks down, in striking contrast, on the busy scene which capital and enterprise have created in the valley below. The main building of these works is splendidly designed, being 200 feet long and 80 feet broad, under this large roof, a gigantic water-wheel, 34 feet in diameter, three steam-engines turning rolls for sheet and bar-iron of all dimensions, one of Nasmyth's steam-hammers, and a wire-drawing apparatus, and, with all this, there is room to turn a coach and six in the open spaces. The roof projects beyond the inner walls on the four sides, and covers the puddling-furnaces on one side, and forms a huge coal-shed on the other. In the adjacent buildings are a casting-room, with a cupola furnace, the smiths' shop, and carpenters' shops, with some lathes and other tools that have recently been added very judiciously to the establishment. A blast-furnace has also been at work for some months, so that the whole will soon form a complete establishment on the English plan, such as is adapted to the wants of the country in which it stands. The history of these works is very instructive on the various points that we have indicated, as impeding the progress of industry in Germany, from small to large undertakings. In the commencement the kind of surveillance insisted upon by the authorities, and which peasants are obliged to submit to, was very irksome to these new comers, whose plans went beyond the calculations of the mining officers. Nor has this control been easily shaken off, although it is now no longer enforced, for the distance from the capital strengthened more than was then expected the power which the district officers possess to retard and annoy. But the greatest difficulty the undertaking had to contend with arose from the singular self-imposed restrictions which we have described as lessening the exertions of the smelters in the Silesian district. Nothing could be more natural than the expectation that a large rolling mill would induce all those furnaces to increase their production, in which case a fair supply of pig-iron would be insured. But when the Nisterdale Company came into the market as buyers, the owners of the privileged furnaces thought that the good old times had come back again, and that their monopoly was on the point of showing its value. The price of pig-iron was immediately raised 25 per cent., not having been at a low figure before the rise. But in dealing this way with Englishmen the smelters had counted without their host. As soon as it became evident that the combination was sufficiently powerful to impose a price upon them, the company determined to smelt for themselves. Mines enough lie around them, and they forthwith purchased valuable royalties in the district of Widenburg, from Count Hatzfeld, whose forests ensure them an adequate supply of charcoal. Within a year after taking the resolution, two blast-furnaces were smoking—one at Widenburg, the Silesian, and one at Nisterdale, and the supply of ore from the mines is sufficient to furnish five or six. The projected railroad from Dillenburg to the Rhine will supply them with fuel on cheap terms, and there is every reason to expect that the energy and skill which have been displayed will be well rewarded. It was, however, necessary to complete the whole undertaking, from mining to the preparation of materials for machines, before the company could say that they were secure against the chances which, in the state of the iron trade in Germany, have to be overcome by a large company, and their success will facilitate the progress of any who follow them. Near Eschweiler, two stations, distant from the direction of Aix-la-Chapelle, are iron-works that form creditable specimens of manufacturing industry in Germany. At the extensive mill of Messrs. Michaelis and Co., close to the railway, between Eschweiler and Stollberg, rails are rolled in a style that quite equals the best efforts of English manufacturers. The material is a mixture of English and Belgian iron, which yields a durable and tough rail. The upper workmen are, as is common in large establishments in this part of Germany, Belgians or French. The labourers are mostly German. The large works of John Cockerill, near Liège, formed for many years a school that Germany did not possess; and hundreds of workmen acquired there the skill in working rolls and steam-hammers, that has since proved to them a source of unending profit. Puddlers and roll masters, instructed at Seraing, obtain wages nearly equal to those paid in England, if they are known to be steadily conducted. The work contains several sets of rollers, with the corresponding puddling and re-heating furnaces. Instead of a hammer, the new compressor, used in England, may be seen here. The production is calculated at 20 tons of rails per week. Since the beginning of the present year, an equally extensive work, belonging to the firm of Michaelis and Co., has been started on the other side of the tunnel towards Eschweiler. The plan of this new rolling-mill, like most of the new establishments on this side of the Rhine, is very good. Rollers for steam-hammers are erected on several of the puddling-furnaces; and care has been taken to introduce the latest improvements.

We shall, at a future period, give some further particulars.

EAST POOL MINING COMPANY.

A meeting of adventurers was held on Tuesday, the 20th June, when the accounts were presented, showing balance against the adventurers of 837.18s. 4d. A call of 5s. per share was made, and the captain instructed to take a list of defaulters to the solicitors, that they may be sued, in name of the creditors, for payment. The following report, from Captains W. Thomas and E. Cartlew, was read to the meeting:

East Pool Mine, June 20.—In the 110 fm. level, driving west of the engine-shaft, the lode is 3 ft. wide, and contains stones of copper ore. In the 100 fm. level, west of the engine-shaft, the lode is 2 ft. wide, containing good stones of copper ore, and looks promising; we have 10 fms. to drive this end, to get under the ore ground in the 90 fm. level. In the 90 fm. level, driving west of the engine-shaft, the lode is 5 ft. wide, containing good stones of tin and copper ore; we have in this level 7 fms. to drive, to get under the ore ground in the 80 fm. level. In the 80 fm. level, east of the engine-shaft, we are driving on a south branch, which is 18 in. wide, and worth 5s. per fm. for tin and copper. In the 36 fm. level, driving west, on the north lode, the lode at present is poor. In the 16 fm. level, driving west, on the same lode, the lode is 3 ft. wide, and contains saving work for tin. We employ 34 men on tribute, and 21 men and 9 boys on tutwork. The average tribute is 11s. 6d. in the 17.

The accounts submitted were as under:—

| | |
|--|-------------------|
| To labour cost for April and May, 1848 | £620 17 1 |
| Merchants' bills for ditto | 318 18 8—939 15 9 |
| By ores sold April 6, 1848 | £455 16 8 |
| Less dues | 15 3 10—440 12 10 |
| Tin sold May 3 | £ 75 5 10 |
| Less dues | 2 10 2—72 15 8 |
| Tin sold June 14 | £ 41 8 11 |
| Less dues | 1 1 7—40 1 4 |
| Two months' water drainage | 120 0 0 |
| Received from tributaries, &c. | 203 15 6—877 5 4 |
| Loss | £ 62 10 5 |
| Dr. balance last account | 21 7 11 |
| Present Dr. balance | £ 83 18 4 |

[These accounts do not appear to us at all satisfactory; and, we understand, a similar feeling exists among some of the out adventurers. It would appear, from the figures given, that the mine is in debt 837.18s. 4d., and yet a call of 5s. per share is made, "for the purpose of paying off the merchants' bills." To what amount these bills are owing is not shown; but, we contend, the shareholders have a right to know. We are told that, four months since, a call of 5s. per share was made, to pay off the debts of the company; and now a new batch has sprung up! Indeed, we have heard it hinted that the present call is made to make up a deficiency on the part of one of Lady Bassett's former stewards, and that her ladyship comes upon the adventurers a second time for dues charged to the mine by the said steward, but not accounted for to her ladyship. This, however, is a rumour to which, knowing the usual liberal spirit of her ladyship, we do not attach any credence.]

WHEAL CALSTOCK MINING COMPANY.

At a general meeting of adventurers, held at the mine, on the 21st June, the accounts were examined and passed, showing—Received on calls, 12567.19s. 6d.; for materials sold, 1st. 12. 4d.—12827.10s.—By mine cost to end of April last, 12567.7s. 10d.—Leaving balance in favour of the adventurers of 254.13s.—On a statement of assets and liabilities, there was a balance of 867.13s. against the mine.—A call of 20s. per share was made, and the purser instructed to give notice to all shareholders to pay calls in arrears, and the latter amount at once.

The following reports from the purser and Capt. S. Secombe were read:—

Stoves Cottage, Liskard, June 20.—In taking the different workings as we inspected them, I shall begin with the costuming in the orchard, where you have laid open the backs of three lodes, known by the names of south, middle, and north lodes. The indications contained in the backs of these lodes are of an encouraging character, especially the middle and north ones, which I believe will form the lode in depth, and will, when laid open, be found to contain large deposits of copper ore, and would recommend an effectual trial being given to it. I approve very much of the whim-shaft being sunk to intersect the middle lode, instead of sinking it on the underlay of the south lode, as at first commenced, believing it will be communicated to the deep adit in a much less time, and at a considerable less expense, and be much more convenient for future workings. The deep adit is driven west from the valley shaft about 35 fms., a great part of which is on the course of the south lode, or rather on a flookan that runs between the south and middle lodes. Near the present end the middle lode is intersected, and cut into, and found to be from 3 to 4 ft. wide, composed of capel, quartz, mudiic, and copper ore—a portion of the north part of this lode is saving work. As soon as the whim-shaft is communicated to this adit, I would recommend driving west on the course of this lode, and, at the same time, cross-cut north, to prove if the north and middle lodes are not together at this

depth. The shallow adit is driven west from Pawley's shaft about 140 fms. on the course of a lode, which, from its run, is a canteer to the east and west lodes; the character of this lode is by no means congenial for copper, and I do not think, if explored, either in length or depth, anything like a deposit of copper ore would be met with, and would not recommend any further outlay on it. The cross-cut now being driven north, near the end of the shallow adit, intended to intersect the lodes in the deep adit, I would recommend its continuation a few fathoms further, in order to prove if the three lodes already gone through are not the same as those laid open by costeaning on the eastern part of the set, in connection with the deep adit; should it so prove that they are the same lodes, the present indications are not sufficient to justify any further outlay of capital in exploring them in this part of the set; but if the lodes in the eastern part of the set prove by this cross-cut to be north of those already cut, it will then depend on the character and appearance as to what further operations would be advisable for the development of the same.

Wheal Calstock Mine, June 21.—Immediately after our general meeting, on the 4th of April last, on cutting still further into the lode, in the deep, or 50 fm. adit, a good lode of copper ore was discovered about 2 ft. big, the lode altogether being 6 ft. wide; judging from what can be seen of the lode, it will turn out at least 3 tons of ore to the fathom (this ore is that referred to by Capt. Secombe), with every chance of its improving; as we find, in sinking our new shaft, droppers are making off from the next lode south, and dropping into this lode. A few feet further north is also a very large lode opened at the surface, 6 ft. wide, consisting of fluor-spar, prun, mudiic, with black and yellow ore; this, with the south lode, will unite with the one which has made the copper ore both in depth and driving west. To enable us to take away the ore, a pair of men are sinking a new shaft from the surface towards the deep adit, which is down 104 fms., and another pair of men are raising on the lode from the deep adit, to meet the shaft; this rise is up from 6 to 7 fms., and there are 15 fms. more of ground to rise and sink through, to hole the shaft, when we shall immediately begin breaking ore. In the 30 fm. level we are daily expecting to cut these lodes 180 fms. west of where the ore is discovered in the 50 fm. adit; and, from reports given us respecting the lode seen in a well pit, just over the place we shall cut them, there is every chance of finding ore in them. The lode in the well is very large, consisting of fluor-spar, mudiic, gossan, and rich coated yellow ore; this information was given us by a mine agent who, some years since, had the well cleared up to examine the lode. Perfectly satisfied that we have a most valuable mine coming into work, and wishing to strengthen this opinion, for the confidence of the shareholders, I have called in Capt. Secombe, who has inspected the mine. The money expended from the commencement, as per cost-book, 12567.7s. 10d.; our liabilities, including the pay for May, and due on Saturday next, is 2417.6s. 6d.; against which are assets of 1547.13s. 6d.—leaving the mine in debt 867.13s.—W. B. COLEMAN.

Wheal Comfort.—At a meeting of adventurers, held at Wheal Buller account-house, on Friday, the 25th June, the accounts were presented and allowed, as follows:—By ores sold (less dues), 17567.8s. 11d.; to balance against adventurers at the end of Jan., 2107.19s. 8d.; costs and merchants' bills for Feb., March, April, and May, 15447.1s. 8d.—17557.1s. 4d.; balance, 127s. 7d.—There having been sold, however, to meet the coming costs, upwards of 11007. worth of ore net, and there is now raised, and will be sold in July, about 3007. worth more, being quite enough to meet the next four months' cost—consequently, the next meeting a dividend is confidently anticipated.

GREAT WHEAL ROUGH TOR.

Sir.—Having seen two letters, in the *Mining Journal*, signed "An Old Miner," relating to the Great Rough Tor Consols Mine, and not wishing that any undue expectations of this concern should be raised in the public mind, and, moreover, to show my abhorrence of anything like puffing—which is more likely to damage than benefit a really good thing—I beg to hand you, for insertion in the *Mining Journal*, the enclosed copy of a letter from the resident agent, whom I believe to be incapable of misrepresenting facts, and who, indeed, would not be entrusted with the responsible situation he now holds a single day longer, were it imagined otherwise. A SHAREHOLDER.

London, June 28.
Great Rough Tor Consols Mine, June 26.—Since I wrote to you last, another "Old Miner's" letter has appeared in the *Mining Journal*, but who it is I cannot make out, as no one has been seen since Mr. W., with the exception of a gentleman, a shareholder, living in this neighbourhood who gave us a call on Thursday last, but who I have not the slightest suspicion of as being the writer. The last letter states more than facts, as we have not seen the "branches of malleable copper as large as a man's finger." It is true, we have met with thin pieces of this mineral, which we found between the heads, or divisions, of the ground. Some of these I sent you by my son, by which you will perceive that they are very thin, and that their length, breadth, or thickness, cannot be described. Had they been of sufficient consequence to have thrown any new feature on our prospects, I certainly should have written to you. I think the letters are put in for the sole purpose of getting up the price of shares; and the little information the writer or writers have possessed themselves of, must be gathered from some of our workmen. We have had some little difficulty in keeping the water out of Thomas's shaft, and have been obliged to put down an extra lift of pumps, to assist the bottom pump—the water now nearly all coming from the bottom of the shaft. This we have completed, or nearly so, and the men will be again sinking in a few hours.—J. HIRSHENS.

RESUGGA MOOR TIN MINE.—We have received a report, by Prof. Ansted, on the character and prospects of this mine, which is situated about three miles north-east of St. Austell, in the stanniferous granite—a district containing numerous tin lodes, among which the Carclaze Mines are situated, and long known for the vast quantity of stream tin which has been obtained from the decomposed granite at surface. The report states, that besides the three known tin lodes in the set, it contains a cross-course, holding iron ore (the red oxide) of uniform quality, and in good condition for the Welch market. The tin lodes are contained in a white, favourable granite, clearly defined, not of large dimensions, unmixed with foreign or injurious minerals; they contain oxide of tin, of great value and beauty. Judging from the appearance of the mine, and its history, and the small depth to which it has at present reached, Mr. Ansted has no doubt but that ore is still to be raised; and he recommends that, notwithstanding, from the underlay of the lodes, the ore ground becomes narrower in depth, sinking should be continued at least 10 fathoms—that the flookan be driven through in a direct line eastwards—that the iron lode, and all the ground, should be laid open towards the west, as the tin lodes approach the iron cross-course, and that the drifts should be continued through this cross into the tin ground beyond—that the 20 fm. level be the one selected from which to prove the lodes; and should the workings turn out profitable, something should be expended on a trial drift north and south, in search of new tin lodes. The granite is exceedingly stanniferous, abounding with small stringy lodes; and if two or three of these should be found so near together, as to allow of working with the present engine and shafts, the produce would be increased without much additional outlay. The general management of the mine he found satisfactory, but recommends a tramroad, of about two-thirds of a mile in length, for the transport of iron ore, which could then be put on board at probably 4s. per ton, and could not fail to return a handsome profit. He considers the Resugga Mine of considerable promise.

CORNWALL NEW MINING COMPANY.—We noticed the formation of this company in the *Mining Journal* of the 18th March last, and the mine sets which they had secured—among which were the North, South, and West Georgia Mines, in the parish of Towanack, near St. Ives, and the Trewortha Tin and Copper Mine, in Lyn Lant, St. Ives. These mines, we understand, are progressing highly satisfactorily; we have seen some specimens of tin from the former exceedingly rich in fine large crystals; and of Trewortha, great hopes are entertained, as, in the adjoining mine (Wheal Speed), they have just cut a lode, producing 19 tons of rich tin per month, and which lode runs through the Trewortha sett.

Another Boiler Explosion at Dudley.—A correspondent, writing yesterday evening, says:—For the second time within the short space of three weeks we have to record one of those appalling accidents which have of late been of such frequent occurrence in this district, and attended with such terrible consequences. The scene of the new catastrophe is the Bloomfield Iron-Works at Tipton, near this place; and it seems that one of the boilers in use was a condenser, somewhat resembling in shape an egg, save that it was flat at one end. From some cause or other, the top of it gave way, an explosion took place, and the boiler, which was about 7 tons in weight, was forced, with considerable violence, in a horizontal direction across the canal, and into a brick-yard 100 yards distant. So soon as the first shock was over, search was made after the bodies of the unfortunate persons who had suffered by the occurrence; and up to the hour of writing, the following had been discovered:—Henry Millington, aged 19, found dead, unmarried; W. Perry, much burnt, and not likely to recover, wife and two children; William Jones, head cut, badly scalded; John and Thomas Lister, also very much burnt; three females, engaged in packing bricks, much injured. The cause of the explosion is a mystery. It is fortunate, however, that a great number of those employed at the works were at their supper outside the building at the time, or the loss of life must have been much greater. It is high time that the question of these explosions underwent a searching and impartial investigation, seeing that they are becoming of such frequent occurrence.

Victoria Iron-Works.—In hastily describing the awful accident which occurred here, in last week's *Journal*, we stated it to be an explosion. The fact is, the accident was occasioned by the breaking of the chain to which the bucket was attached, in which 11 men were descending the pit; they were all killed on the spot.

Fatal Boiler Explosion at Sea.—On Wednesday evening, about half-past nine o'clock, the steamer *Neptune*, belonging to North Shields, was off that port, a distance of about six miles, when the boiler burst, and the captain, named Benjamin Baxter, was so severely scalded, that he died shortly after being landed at North Shields. The fireman also, named W. Robson, is not expected to survive the injuries he received from the same cause. The steamer, it appears, had been racing to secure the towing of a vessel into Shields, and had got the tow-rope on board.—*Sunderland Herald.*

NEW PATENTS.

D. S. Walker, London-bridge, merchant, for improvements in the manufacture of bands or straps for hats, caps, shoes, and stocks.
H. Archer, Shaftsbury-crescent, Pimlico, Middlesex, gentleman, for improvements in matches and in the production of light, and in the apparatus to be used therewith.
W. Hunt, Duddershill, Worcester, chemist, for improvements in obtaining certain metals from certain compounds containing these metals, and in obtaining other products by the use of certain compounds containing metals.
B. Clark, Strand, Westminster, lamp manufacturer, for certain improvements in gas-burners, and in candle-lamps and other lamps.
F. W. Mowbray, Leicester, paper dealer, for improvements in the manufacture of looped fabrics.
J. Mackintosh, Glasgow, gentleman, for improvements in obtaining motive power.
J. Skerchley, Anster, Leicestershire, gentleman, for improvements in bricks, and in the manufacture of tobacco-pipes and other like articles.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

T. Loyling, Bishop Wearmouth, Durham, mangle.
J. Paterson, Champs-Élysées, waist-belt.
Woods and Thomas, Champs-Élysées, rotary postage-stamp and gum ticket dumper.
F. Harris, Wood-street, ticket-pin.—*Mechanics Magazine.*

Current Prices of Stocks, Shares, & Metals.

| STOCK EXCHANGE, Saturday morning Eleven o'clock. | |
|--|--------------------------------|
| Bank Stock, 9 per Cent., 190 904 | Belgian, 44 per Cent., 66 9 |
| 3 per Cent. Reduced Ann., 84 1/2 | Dutch, 24 per Cent., 43 1/2 |
| 3 per Cent. Consols Ann., — | Brazilian, 5 per Cent., 64 1/2 |
| 3 1/2 per Cent. Ann., 84 1/2 | Chilian, 5 per Cent., — |
| Long Annuitie, 84 1/2 | Mexican 5 per Cent., 16 1/2 |
| India Stock, 10 1/2 per Cent., — | Russian, 5 per Cent., 92 |
| 3 per Cent. Consols for Op., 83 1/2 4 | Spanish, 5 per Cent., 11 1/2 |
| Exchequer Bills, 10007. 2 1/2 d. 38 37 pm. | Ditto 3 per Cent., 22 1/2 |

MINES.—The amount of business done in the mining share market this week has been of a very limited character, still there have been inquiries for shares in several of our leading mines, but at such prices as will not tempt sellers; we, therefore, hope that with an advance on the one part, and a concession on the other, some shares may change hands. The continued depression of the standard has a deteriorating influence on shares in copper mines especially, and there is consequently an apparent preference shown for lead mines; but we hope that the standard has now reached its lowest point, and we may, therefore, anticipate an advance, with an improved demand in the metal market.

The political, financial, and commercial position of France, has been represented as precluding the expectation of any immediate demand for copper in that market, but it should be borne in mind that the smelters themselves have closed that mart for more than two years, by the high rate to which they had brought the price of fine copper, thereby compelling them to resort to a cheaper market.

The recent improvements in Mary Ann continues to create business in these shares, and several have changed hands.

South Wheal Bassets have been inquired for, but we do not learn that many have been sold.

In Tamar Consols some business has been done. The directors have announced, for the 12th July, the payment of the fourth or final portion of the debentures raised for the purpose of establishing the Tamar Smelting Company. There is every probability of an advance in these shares, which are consequently enhanced in value by the liquidation of the above.

South Caradon is reported to have improved, and as looking as well, if not better, than she ever did before.

West Caradon has also improved in Lopes lode, which is represented to be worth from 800 to 1000 per fathom.

South Dolcoath is stated to hold out considerable encouragement. We have seen some fine stones of rich grey ore, from branches, or droppers, falling towards the lode, which they expect to cut in the 60 fm. level.

Shares in the following mines have been sold this week:—Devon Great Consols, Herodsfoot, Mary Ann, Pennant, West Wheal Treasury, South Wheal Betsey, South Trelawny, Wheal Franco, Tamar, Tregordon, Gwinnar, &c.

South Wheal Betsey meeting was held on the 17th, when a call of 5s. per 20th share was made. By letters received yesterday, we learn that, in driving the cross-cuts to intersect the newly discovered lodes, the whole ground is completely mineralised, and rich branches dropping towards them, and the water running very fast in the ends. Shares have been sold in the locality.

The Callington Mines quarterly meeting was held on Wednesday last; the agent's report represented the position and prospects of the mine in a most favourable view. The statement of accounts, which we published last week, shows a balance of 5977.11s. 2d. in favour of the company, with copper ore bills coming due; and, but for the lowness of the standard, a dividend would have been declared.

During the early part of the week, there was a lively inquiry for shares in some of the foreign mines, and a few shares changed hands; but we do not find the market maintained. The shares which have been done are—St. John del Rey, United Mexican, Bolanos, Del Monte, Australian, Alten, Kingzligthall.

Despatches have been received by H.M. packet *Crane*, from the St. John del Rey, Imperial Brazilian, and National Brazilian Mines.

St. John del Rey's letters advise to the 28th April, and report the satisfactory progress of the new surface operations, as well as an abundant supply of good work for the stamps: gold extracted to the 18th April, 5132 oitavas, from 227 cubic feet of sand; and to the 28th, 10,030 oitavas, from 468 cubic feet.

The Imperial Brazilian Company have received remittances of 55 lbs. 9 oza. 18 dwts. 12 grs. of gold dust (25000 value). The returns from Gongo Soco, from the 11th to the 22d April, are 4 lbs. 7 oza. 16 dwts. Arrangements had been completed for the conveyance of the heavier pieces of the machinery from the port to Bananal.

The National Brazilian letters are brief, and report the produce for 10 days (with a diminished force) as 4 mcs. 68 grs. from Cocoes, and 3 mcs. 1 oit. 5 grs. from Cuiba.

A report of the annual meeting of the Asturian Company will be found in another column, the directors' report submitted to which will be found highly interesting, and there is no doubt the prospects of the company are brighter than at any former period.

The following arrivals of specie have taken place since our last, viz.:—By the *Niagara*, from New York, which arrived at Liverpool on Saturday, specie to the value of 16,0007. The *Red Boy* steamer arrived at Hull on Saturday evening, from St. Petersburg, bringing 150,0007. in gold bars. The Peninsular and Oriental Steam Navigation Company's ships, *Madrid* and *Hindostan*, arrived at Southampton, the former on Saturday, from Spain and Portugal, bringing 36 packages of specie on freight, value 11,5007.; and the latter with the East Indian heavy portion of the mail, and specie, value 14,3247., and gold coin to the amount of 31237. on freight.

RAILWAYS.—At the commencement of the week, the share market was in a very much improved state, and, in many instances, prices considerably advanced; these advances remained firm on Thursday, and the market continued exceedingly buoyant. The settlement occupied some attention, although speculative business has been of late almost only nominal. Business, in general, closed last night moderate in amount; but the advanced prices of the week were fully sustained.

HULL, THURSDAY.—The events of the week in France have disturbed the share market, but it is now more tranquil. The public are taking small amounts of stock for investment, but not speculating. Local stocks remain unaltered. The nominal rates are those of last week, there not having been sufficient business to vary the quotations, except in a slight degree.

RAILWAY TRAFFIC RETURNS.

| Name of Railway. | Length Rwy. | Present actual cost. | Price per share. | Last Div. | Traffic 1848. | Traffic 1847. |
|---------------------------------------|-------------|----------------------|------------------|-----------|---------------|---------------|
| Birkenhead, Lancashire, & Chesh. | 15 | 997,284 | 37 | 5 p. c. | £ 808 | £ 637 |
| Caledonian | 130 | 3,594,470 | 308 | — | 4197 | — |
| Chester and Holyhead | 59 1/2 | 2,871,470 | 194 | — | 937 | — |
| Dublin and Drogheda | 35 | 754,259 | 204 | — | 563 | 799 |
| Dublin and Kingstown | 7 1/2 | 473,282 | 6 | — | 1048 | 1124 |
| Dundee, Perth, & Aberdeen Junc. | 47 | 41,073 | 26 | 8 | 1001 | — |
| East Anglian (Lynn to Ely) | 55 1/2 | 1,062,742 | 61 | — | 566 | — |
| East Lancashire | 26 | 1,733,915 | 171 | — | 1125 | 906 |
| Eastern Counties and Norfolk | 295 | 9,833,859 | 144 | 4 | 15810 | 13618 |
| Eastern Union | 51 1/2 | 979,926 | 20 | — | 1005 | — |
| Edinburgh and Glasgow | 53 | 2,481,767 | 444 | — | 3316 | 3079 |
| Edinburgh and Northern | 29 | 1,392,092 | 171 | 4 | 1566 | — |
| Glasgow, Paisley, and Ayr | 64 1/2 | 2,097,531 | 70 | 6 | 2114 | 2510 |
| Glasgow, Paisley, & Greenock | 47 | 1,241,061 | 194 | 4 | 1238 | 1077 |
| Gt. Southern & Western, Ireland | 110 1/2 | 1,809,787 | 201 | 4 | 9378 | 1377 |
| Great Western | 231 1/2 | 10,970,636 | 86 | 7 | 21922 | 22282 |
| Kendal and Windermere | 10 1/2 | 169,888 | 23 | — | 193 | 190 |
| Lancaster and Carlisle | 70 | 1,395,193 | 504 | 4 | 2128 | 1326 |
| Lancashire and Yorkshire | 136 1/2 | 7,597,618 | 86 | 7 | 11179 | 9304 |
| London and North Western | 428 | 21,513,854 | 121 | 8 | 45065 | 45363 |
| London and Blackwall | 4 | 1,241,061 | 44 | 12 | 1967 | 1198 |
| London, Brighton, & South Coast | 161 1/2 | 6,087,822 | 201 | 4 | 9578 | 8785 |
| London and South-Western | 189 | 6,264,164 | 431 | 8 | 9879 | 9467 |
| Londonderry and Enniskillen | 14 1/2 | 145,135 | 16 | — | 138 | 146 |
| Manchester, Sheffield, & Lincolnsh. | 62 | 2,336,624 | 58 | 5 | 2735 | 1873 |
| Maryport and Carlisle | 28 | 440,851 | 40 | — | 501 | 667 |
| Midland Company | 422 1/2 | 9,855,123 | 101 1/2 | 7 | 21179 | 19885 |
| Midland Great Western (Irish) | 36 1/2 | 725,332 | 103 | 4 | 954 | — |
| Newcastle and Carlisle | 66 1/2 | 1,407,375 | 108 | 6 | 2328 | 2228 |
| North British | 81 | 2,800,748 | 214 | 5 | 2122 | 1668 |

The Metallurgical Treatment of Ores.

By JOHN MITCHELL, M.C.S., author of *A Manual of Practical Assaying, &c. &c.*
(Continued from June 24.—No. XXII.)

TREATMENT OF THE ORES OF BISMUTH.—The metal forming the subject of this paper is comparatively rare in Nature, as are also its applications in the arts. It is employed for a few purposes only, as in the preparation of the substrate (pearl white, used as an enamel), in the silvering of globes, in making safety-plugs and plugs for steam boilers, and alloys for printers' types and solder, and, lastly, in the preparation of some fluxes in enamel and porcelain painting. The ores of bismuth which are worked generally contain it in the native state, accompanied by various arseniurets, &c.—so that the bismuth of commerce is ordinarily contaminated with arsenic, copper, and some other metals; it also very often contains silver.

Pure Bismuth is a greyish-white metal, with a shade of red; its structure is laminated, and it is exceedingly fusible.

Native Bismuth is met with in lamellar or crystalline masses; it is reddish-grey, bright in the interior, but dull on the surface, brittle, and can be cut by a knife; its specific gravity is from 9.000 to 9.78. It nearly always contains a little arsenic and silver; it is found in Schneeberg and Johanngeorgenstadt, in Saxony, Strachimisch, in Bohemia, Modum, in Norway, Transylvania, Swabia, France, and Sweden. It occurs in feathery masses, with arsenical cobalt, at Huel Sparren, near Redruth, and at Herland, near St. Ives.

Sulphuret of Bismuth.—This mineral generally contains a little metallic bismuth; its colour is steel-grey, passing into greyish-yellow; it has nearly the same localities as native bismuth. At Caldbeck Fell, in Cumberland, it accompanies molybdena and apatite. It is also found at Huel Sparren, and disseminated in Jasper at Botallack, near the Land's End. It occurs at Magurka, in Hungary, and in the cerite at Bastnaes, near Riddarhytta, in Sweden. It contains, according to Rose—sulphur, 18.72; bismuth, 80.98—99.70.

Oxide of Bismuth.—This species is very rare, and is only met with as a crust, or powder, on specimens of native bismuth; it is straw-yellow. Lampadius gives as its composition—oxide of bismuth, 86.4; oxide of iron, 5.1; carbonic acid, 4.1; water, 8.4—99.0.

Cuprous Bismuth is, in colour, lead-grey, steel-grey, or tin-white, tarnishing very readily in the air. It is found in cobaltiferous veins, traversing granite, at Neugluk and Wittichen, in Furstenburg. According to Klaproth, it contains—sulphur, 12.58; bismuth, 47.24; copper, 34.66—94.48.

Bismuth Blende.—Its colour is dark brown, or wax-yellow, and accompanies cobalt and native bismuth, at Schneeberg, in Saxony. It contains, according to Karsten—oxide of bismuth, 69.38; silica, 22.23; oxide of iron, 2.40; oxide of manganese, .30; phosphoric acid, 3.31; water, &c., 1.01—98.63.

Telluric Bismuth is a light steel-grey, inclining to lead-grey. It occurs with brown spar, at Pilsen, in Hungary, Transylvania, and Norway. It contains, according to Wehrle—tellurium, 29.74; bismuth, 61.15; sulphur, and traces of selenium, 2.33; silver, 2.07—95.29.

Needle Ore—Triple Sulphuret of Bismuth, Lead, and Copper.—This substance is steel-grey, or lead-grey. It is found in the mines of Pychminskoi and Klutschefskoi, in Ekaterinenberg, in Siberia. According to Johan, it contains sulphur, 11.58; bismuth, 43.20; lead, 24.32; copper, 12.10; nickel, 1.58; tellurium, 1.32—94.10.

As before stated, bismuth is very fusible, as well as volatile, so that, when ores containing it are exposed to heat, it separates from less fusible matters by a kind of liquation, as explained in a former paper on the treatment of argenteous copper. It is on this property that the process generally employed for the treatment of the ores of bismuth depends; but, in the manner of carrying it out, some variations are occasionally made. It is sometimes executed on a floor of beaten clay, near the mine from which the ore is extracted; some large wood is placed on the floor, and upon that some smaller (brushwood); the ore is then heaped upon it, and the wood lighted; after the whole of the wood is consumed, the grains of metal are separated from the ash and remaining pieces of charcoal by washing, and the resulting bismuth fused, and cast into ingots, which are then ready for the market. Sometimes the ores of bismuth are treated on an eliquation hearth, as already described. The metal can also be obtained by the use of pots similar to those employed in the preparation of crude antimony. These will be presently brought under the notice of our readers.

The most common process is that employed at Schneeberg, in Saxony, and consists in heating the ores in cylindrical tubes of cast-iron. These tubes are about 5 ft. long, and 8 in. in diameter; each of them is provided with a sheet-iron cover, and a plug of baked clay is adapted to the other end; the plug has an aperture in it, for the purpose of allowing a passage for the fused metal. Five tubes are placed, very nearly horizontally, in a furnace, similar to that in which gas retorts are fixed. They are so fixed, by their extremities in the two walls of the furnace, that the ends plugged with clay are in the front, and the other ends at the back, of the furnace. Under each of the clayed ends is placed a cast-iron vessel, under which is a small fire—these are for the purpose of receiving the metal as it runs from the tubes. Behind the furnace is a large tank of water, in which the residual matter from the tubes is placed. The operation commences by heating the tubes for three or four hours, or until they are red-hot—at which time about 1 cwt. of the ore, broken to the size of a nut, is thrown into each of them. In about ten minutes the fused metal commences running, and, as soon as any of it passes into the receivers, it is covered with charcoal, to prevent oxidation. In half an hour each charge is worked off, the tubes are then emptied, and a fresh charge introduced. When the receivers are full of bismuth, it is ladled into other vessels, its surface cleaned, and then allowed to cool; each cake so produced is nearly pure bismuth, and weighs from 25 to 50 lbs. In about eight hours, one ton of cobalt ore, impregnated with bismuth, is thus worked off, and about 1½ cwt. of the latter metal obtained, with a consumption of from 60 to 70 cubic feet of wood. It is by the same process that the alloy, known as speis, is treated. This, as we shall hereafter point out, is procured in the preparation of smalts.

TREATMENT OF THE ORES OF ANTIMONY.—Antimony is brought into the market in two states—crude antimony and regulus of antimony—the former is the sulphuret, purified from gangue; the latter is metallic antimony. Metallic antimony is largely used in the manufacture of type metal, and is, therefore, a metal of some considerable importance; it is also employed medicinally, in many shapes, as James's powder, antimonial powder, and tartar emetic. The ores of this metal are not very numerous; the sulphuret disseminated in quartz is the ore generally worked; it contains very often silver, and even gold.

Pure Antimony possesses a white or greyish-white colour, and is very lustrous. It possesses a peculiar odour when rubbed or heated, which somewhat brings to mind that of garlic, and is readily fusible; its specific gravity is 6.71 to 6.86.

Native Antimony.—This species is very rare; it has a tin-white colour, but speedily tarnishes, when it takes a yellowish tint. It is found in the Hartz, at Shalberg, in Sweden, as also at Grenoble, Mexico, and Connecticut, in which latter place it is associated with sulphuret of antimony. It usually contains about 98 per cent. of antimony.

Berthierite, so named after Berthier. Its colour is dark steel-grey, inclining to pitch-black-brown, and has a metallic lustre. It is found at Chazelles, in Auvergne. Its composition, according to Berthier, is—antimony, 52.0; sulphur, 30.3; iron, 16.0; zinc, 0.3—98.6.

Jamesonite is steel-grey, and its lustre metallic. Its composition is—antimony, 84.40; lead, 40.75; iron, 2.30; sulphur, 22.15—99.50.—Rose. It occurs principally in Cornwall, but is occasionally found in Siberia, and in Hungary.

Sulphuret of Antimony.—When in mass presents a long columnar appearance, its colour is light lead-grey; it is very soft. Its composition is—

| | Thomson. | Prout. | Bergman. |
|----------|----------|--------|----------|
| Antimony | 73.77 | 75.0 | 74.0 |
| Sulphur | 26.23 | 25.0 | 26.0 |

Sulphuret of antimony is tolerably distributed, and, latterly, considerable quantities have been found in England, and promise to produce a handsome profit to the adventurers who have taken up the matter. The metallurgical treatment of antimony is divided into two operations, which are generally executed at different works. The first has for its object the separation, by simple fusion, or liquation, the pure sulphuret from the silicious gangue accompanying it. This is a purification exactly analogous to the ordinary process of washing, but is executed by fire. By the second operation, which is not so often carried on as the first, metallic antimony is obtained by treating the crude or sulphuret of antimony just mentioned.

Preparation of Crude Antimony.—Sulphuret of Antimony.—In order to free this substance from its gangue, its great fusibility, as before stated, is taken advantage of; the operation consists, therefore, in a species of liquation. In Hungary, crude antimony is obtained by placing the ore in an earthen pot, the bottom of which is perforated with small holes, and is set upon another pot, which serves the purpose of a receiver, and which is firmly supported by earth; the upper pot is provided with a cover. The upper apparatus being luted with clay, fire is lighted round it, and, after some hours, the whole is allowed to cool; lastly, the lower pot is removed, and the antimony contained in it fused and collected; nearly the whole of the gangue remains in the upper pot. At Malbosc, in the department of Ardèche, the pots employed have a slightly conical form, and contain about 30 lbs. of substance; each pot is furnished with a cover, and is fitted into a lower vessel. A longitudinal canal, or trench, is opened in the ground, the sides of which are kept up by bricks; the trench contains from 25 to 30 pots. As the upper pots are above the level of the ground, some bricks are built up nearly close to them, and a little above them—taking care, in placing them, to set them some distance apart, so as to provide an air-hole for the due combustion of the fuel employed in heating them. When thus disposed, some brushwood is placed near them, and on that coal, until the pots are covered; it is then lit, and, when the charge is supposed to be exhausted, the upper pot is removed, its contents turned out, and a fresh lot of ore

placed in. In this way about four successive charges are made, by which time the lower parts are full. These four charges are worked off in about 40 hours. The following is the return of an operation of this kind, made in 20 double pots, charged four times in 40 hours:—Ore employed, 24 cwts.; sulphuret of antimony obtained, 9 cwts.; coal consumed, 30 cwts.; wood consumed, 4 cwts. In some cases reverberatory furnaces are employed to heat the upper pots, the lower being below the sole hearth of the furnace. By this means, the emptying and recharging the crucibles is an easy matter, and the furnace is kept hot. In order to avoid interruption of the work, Lampadius proposes to place the ore in cast-iron tubes, coated with clay. These tubes are to be placed transversely in a furnace, similar to that described in the former part of this paper, under the head bismuth. This apparatus would, doubtless, succeed, if contact of the ore with the iron could be effectually guarded against. This was best accomplished by smearing the insides with a mixture of powdered felspar and borax, and heating the tube to redness.—In our next week's Journal we shall conclude the treatment of the ores of antimony.

NOTICES TO CORRESPONDENTS.

* * We should feel obliged to all pursers, captains, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal with as little delay as possible.

THE JOINT-STOCK COMPANIES' DISSOLUTION BILL.—We defer offering any remarks in the present stage, the attention of Government having been drawn to the measure; and the Duchy of Cornwall, as well as those most intimately connected with the mining interests, being alive to the importance of the proposed measure.

* * B. M. (Truro).—The Ellismere and Chester Canal is held in 376 shares, of 133l. each, and pays a dividend of 4l. per annum: the present value is 48l.

* * A Mine Adventurer (Brecon) can address a letter for Mr. Hopkins to our office.

ANONIMOUS NOTES.—(T. R., Bristol).—We have not had, for some time past, any information respecting the working of this concern. We know that the most sanguine expectations were entertained—at least, reports of that nature were circulated—by Mr. P. P. Conch, the manager; but we cannot inform "T. R." If such anticipations are likely to be realised. We also believe that one of the parties, intimately connected with the undertaking, was bankrupt; but cannot tell how that circumstance has, or may, interfere with the proceedings. We have no means of ascertaining the price of the shares, or the value of the property—which information, we presume, can be obtained by addressing the manager.

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 20, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JULY 1, 1848.

It is not necessary to make any addition to the copious summary and returns, illustrative of the general mercantile and mining progress of the United Kingdom, during the half-year and quarter just expired, which have appeared in several recent Numbers of this Journal. But it may be neither unreasonable or inconvenient to point out a circumstance or two, which have made our progress in the acquisition of beneficial mining results, in particular, far less decisive and satisfactory than otherwise, beyond all doubt, they would have been. We are encouraged by the evidence which these returns afford, that the general trading and mercantile activity of the first six months of 1848 need not fear a comparison with the activity of the first six months of most of the preceding years. Considering that, in January last, we were but slowly recovering from an immense commercial pressure—that we were then but beginning to steady ourselves after the fever of a commercial panic—a pressure so heavy, and a panic so alarming, that recent or, probably, remote times furnish no parallel to them—and considering also that, in the following month, the course of business was suddenly arrested by an explosion, whose roar and reverberation is still startling and distracting the commercial cities of Europe—taking these things, we say, into the account, we may be thankful, and, in point of fact, we are, that we have sustained the race so gallantly, and that now we are neck and neck with the commercial prosperity of former years: looking to our circumstances as a whole, therefore there is little room for dissatisfaction or complaint. But there is a just foundation for both when the state and oppression of our mining interests, in a quarter from which we might expect better and more considerate treatment, is brought into notice. From the published returns, it is put beyond all doubt, that much of the profit of this branch of our public industry is drunk up by the preternatural and insatiable thirst of the smelting companies. It is an evil and an injury that these associations should be merchant companies at all, or in any sense. It is the proper and original limitation of their business to smelt, and no more than smelt, the ores sent to them. But getting rich, even by that process, they became dealers also, buying up and forestalling the whole produce of the West of England mines. Their great capital has made them the purchasers of almost the entire body of ores raised; and, at this moment, they are the holders of the total pure copper produce of the country. Of course, they make, almost without being challenged, the market price, both of the rough and the manufactured article. It is not the first time, nor nearly the first, that the conduct of these gentlemen has incurred the warm reproof, and earnest expostulation, of the press. Nevertheless, they continue perfectly insensible of the wrongs they impose on those whose table they daily impoverish, and whose nightly pillow they harden—not more insensible is "the dull weed that rots on Lethes' shore" than they will probably continue to be; and, therefore, it behoves the great mining capitalists and proprietors, to consider by what means they can force these companies to be less unjust; or, failing that happy result, by what method the kindling of their furnaces may be rendered unnecessary.

We shall probably return to this subject shortly. In the interval, we trust to see some effort made by those who are so vitally interested, to shake off a domination so oppressive, and to shiver into atoms a monopoly so extortionate, by the operation of which their outlay and their labour are rendered comparatively unproductive.

The remarks made in our columns of the two past weeks, touching certain matters and individuals, which are likely to form subject for the decision of a jury, and which have excited much attention in the mining world, have been visited upon us in the shape of legal process, for the recovery of "unliquidated damages," on the grounds, we assume, of the character of the plaintiff having been impeached, or impaired, by the remarks which we have felt called upon to make under the circumstances, and the information we had collated, as we believed, from the best and most authentic sources. The proceedings to which we refer have been instituted by Mr. PAUL RABEY, the younger; and, as in duty bound, we have entered an appearance to the action. We trust that the explanations which may be afforded on the one or other side, or the good sense of the plaintiff, will render unnecessary an appeal to a jury; but should such unfortunately be the result—while we grudge the lawyers their fees—it will be a source of regret to us, that we should unwittingly have subjected the plaintiff to expenses, which we naturally wish to be relieved of ourselves. We have often repeated, that our columns are, at all times, open to parties who may feel themselves aggrieved by any remarks which may appear therein, whether emanating from ourselves or correspondents. We readily offer that course on the present occasion; and, at the same time, have to express not only our readiness, but the pleasure we should feel in being able to afford an explanation, which might be deemed satisfactory; while we need hardly say, that as it is our duty, so it is our desire, to expose abuses where such exist. We should much regret doing an injury to the character of any man, but we know no one in his private situation in life; it is the collective interests of the mining community at large, which it is our endeavour to support and protect. We hope next week to be in a position to state that matters are settled, and that there will be no occasion to go into

Court; but that remains with the plaintiff. Should he decide on an opposite course, we doubt not but that we shall be found at our post, ready to maintain the course we have taken.

We have had much pleasure in reading the published report of the SOUTH AUSTRALIAN COMPANY; the directors are enabled now, for the first time for some years, to declare a dividend to the shareholders—not a very large one it is true; but confident hopes are entertained, that shortly there will be a better and a more auspicious declaration of the state of the company's affairs. The net revenue of the year just expired has exceeded that of the preceding year by about some 7000l.; and although this increase in the produce of their great estate, any more than the total sum of their operations as a company, does not satisfy the just expectations, either of the public or of the shareholders, as to what the chartered privileges of this corporation will enable them to accomplish—still the burthens of the company, as proved by the statements of the report, are materially lightened, and the yoke effectually broken from off their shoulders. The company, it will be seen, have hitherto worked their own mines; but it is purposed, for the future, to lease them to parties willing, under covenant, to conduct them on their own account; and if the terms fairly contemplate the interests of those who concede the leases, and also of those who take them, there can be little doubt of their being more advantageously and more productively wrought by those whom the leases will let in, than by the company itself; besides the better mining results likely to arise, there will be this great advantage—that the company will be more fully disengaged, and have its mind all the freer, to promote those general features of colonisation in the South Australian district, upon which its prosperity and its fortunes are necessarily founded. Of course, we are speaking of the South Australian Company, and the fruits it is at length gathering under its privileges conceded by the Crown. Of South Australia itself, as a sole and separate dependency of Great Britain, we may be permitted to say that, at this moment, it promises soon to erect itself into one of the most flourishing settlements ever yet founded or fed by the resolution and sagacity of Englishmen.

A short time since, we pointed out the advantages likely to result to the colonies of England, in particular, from the contemplated remodelling of her Navigation Laws. It may not be amiss, as a pendant to those remarks, to consider, for a moment, the effect likely to be produced by the proposed revision of the *lex maritima*, on the shipping interests of the United Kingdom at large. For instance, it is alleged, that to open the carrying trade to and from the ports of this country to the ships of other nations, would be practically to displace so much British tonnage, as by our revised law we let in—not so; because, by giving the ships of foreign nations a free entrance to our ports, we procure for the vessels of Great Britain a free entrance to other ports, and make ourselves competitors for much of the carrying trade of the world, in which, by our former law of exclusion to others, we had excluded ourselves from all chance of participating. It was not in the nature of things that by shutting out the ships of Europe from all profitable access to our ports, we shall not have to put up with a very cold reception, or, perhaps, to suffer a practical exclusion from their ports, in retaliation for the inhospitable law which we had allowed to sway us in our own. The value, therefore, of the old regulations which it is proposed to cancel, as compared with that of those which it is intended to adopt, is just this, that we shall open the ports of the United Kingdom to the flags of all nations, in exchange for which we shall obtain the right to float our own vessels, for carrying and transit purposes, into the harbours of the entire world. It is alleged, also, that we shall, undoubtedly, fail in our competition with the northern nations of Europe, and with the United States of America, because they can build, and rig, and man, and provision, their vessels more cheaply than we can; this, if it has any foundation in fact, must be so clearly matter of account, that the difference, one way or the other, could be as clearly stated as any sum in the balance-sheet of a merchant's ledger; but this is mere asseveration.

In general—and we wish to state the proposition as largely as possible—in the commerce of the world, they will have the advantage who have the greatest capital, the greatest skill, and the greatest connection. In all these particulars we are not aware what nation it is which has surpassed this nation, or who, even in any one of these commercial elements, has yet come up to, or even neared, our mark; on the contrary, we have more than any of them, the command of the markets of the world, by reason of the quantities we take, and the regularity with which we pay, timber, cordage, shipbuilding, ship provisions, and men of unsurpassed seamanship, can be had within the circuit of the Imperial Isle in the fullest abundance—in fact, we have always within our reach means as adequate to contest the commercial empire of the world as any separate nation, or any triumvirate of separate nations, can set up against us; and yet, in this contest of the peaceful arts, it is said—but falsely said—that the large and the lusty must succumb to the little and the weak. We cannot, therefore, think we have anything to fear from the competition on which it is purposed to enter, for we believe we have the means of making our industry and our wealth felt everywhere. We are relinquishing, in this case, a small right for a great privilege, and feel confident it will enlarge the extent, and increase the efficiency, of the shipping interests of Great Britain. The alteration is, in fact, but a direct consequence of the tariff alterations, which a few sessions since were carried almost by acclamation. The experiment, if not a dangerous (which we think it is not), is a great and momentous one, and cannot, if successful, fail to enlarge the circle of British interests, and add to the renown of her legislation.

In another column will be found reports of the annual meetings of the BOLANOS and REAL DEL MONTE MINING COMPANIES; and, while in one case it will be seen there is a hope of the shareholders at length receiving some additional returns for their large outlay, and so many years of harassing suspense and fluctuation between hopes and fears, in the other there is little hope of any successful measures being adopted to prevent the general winding up of the company's affairs. In the Real del Monte Company, it is true, there has been paid, in seven dividends, a sum of 72,000l.; but a capital of 753,358l. 6s. 2d. has been entirely sunk on a foreign soil, with a hope of only a small portion being ever received by the holders. By working on the most economic scale, some returns may yet be made, and there is still a chance of a new discovery; but we would not willingly hold out delusive hopes, but shall be most happy to see an unexpected and favourable change. The El Bote Mine of the Bolanos Company has every prospect of being a first-rate prize; and as it is a virgin mine, and producing unusual results, there is every reason to hope that it will prove capable of giving highly profitable and continuous returns. Nothing can show more clearly the extraordinary speculative and flattering nature of mining property than the changes which have taken place in the value of the Real del Monte shares, to possess which, some years since, was considered fortunate at 1300l. per 400l. share, and which are this day quoted at fifteen shillings!!!

EXPLOSION AT HART'S HILL, NEAR DUDLEY.—This awfully fatal occurrence, which we first recorded in the Mining Journal of June 3, has rendered destitute a large number of persons, who were totally dependent for support on the unfortunate deceased, many of whom have left large families. We are happy to see, by our advertising columns, that a subscription has been opened in the neighbourhood for their relief, and, in so short a period, nobly supported. As for ourselves, we shall most willingly aid in calling the attention of the public to this praiseworthy object, and contribute our own mite towards the relief of the sufferers.

NATIONAL BRAZILIAN MINING ASSOCIATION.

(FROM A CORRESPONDENT.)

The present position of the executive of this association of adventurers in foreign mining enterprise, tending to anything but the general welfare, a review of the proceedings for several years past, with a statement of future prospects, cannot but be highly interesting to all concerned in the association. With respect to the Cocas Mine, it was as long since as 1835 that the Cornish captain employed, discovered a vein of jactinga giving signs of gold; but, as he was eagerly engaged in prosecuting another object, and thinking it merely an accidental circumstance, it was not cut into for further discovery, and was left even unassayed. In the early part of 1846 it was, however, discovered that some of the negroes had found out the secret, and, washing the jactinga at their leisure hours, disposed of the gold in the neighbouring village. An investigation was immediately commenced, and it was discovered that the vein was 12 fms. wide, whole to the surface, where it was traced 37 fms., and it was found that the miners had, during the whole of the period elapsed (11 years) been driving parallel with the lode, at a short distance only from it; and thus unknowingly giving facilities for future working on any part. To the best mode of working in a profitable manner the directors have since directed their closest attention, and with every prospect of most favourable results, when the extraordinary conduct on the part of Mr. Collett has caused mistrust and dissatisfaction, at a moment when, for mutual benefit, all should have been harmony and confidence.

The address of Messrs. Oxenford and Hamilton, which has been printed and circulated among the shareholders, and also published in last week's *Mining Journal*, is a clear, unvarnished statement of facts; and no part of which has Mr. Collett, or any of his supporters (if he has any), yet attempted to impugn; and clearly shows, that with respect both to Cocas and Cuiba, the proceedings, under their direction, have been in every way consistent with geological indications, and that Mr. Collett's schemes, formed without any experience of the locality, or practical mining knowledge, are perfectly delusive. The writer of these remarks has been a shareholder from the commencement, took up his proportion of the 12l. shares issued in 1840, and has since paid his proportion of calls necessary to keep the mines in operation; and he cannot conceive why the interest of those shareholders, who have kept their shoulders to the wheel, and borne the burden and heat of the day, should be endangered by factious opposition, by the acts of one who is several hundreds of pounds in arrear on his calls, and whose late extraordinary proceedings appear to have emanated from interested motives. Messrs. Oxenford and Hamilton have been the saviours of the property of the association; as, but for their exertions and support, not only the mines, but the plant and machinery, erected and obtained at great expense, must have reverted to the owners, and left the shareholders nothing for their large outlay.

There is at present every prospect of successful results at both the Cocas and Cuiba Mines; and it is greatly to be hoped that the shareholders who are the deepest interested—viz.: those who have liberally come forward to the support of the directors—will, for their own sakes, still continue to uphold their authority, and thus secure the uniform prosecution of the mines on the plans at present pursued, which can alone tend to a full development of their resources, and make a return to the association for its past outlay. Mr. Collett has made some vague charges against Messrs. Oxenford and Hamilton, for not calling regular meetings, and laying the accounts at least annually before the subscribers; it is, however, well known, that every shareholder could obtain the most ample information at the offices as to the proceedings; and the cause of meetings not being regularly held, was the dearth of any information, except that contained in the published reports—thus avoiding unnecessary expense. If the directors are properly supported in their endeavours for the good of the association, there is little doubt the time is not far distant when the proprietary will be gratified by the announcement of a dividend.

IMPROVEMENTS IN THE MANUFACTURE OF COKE.

[Specification of patent granted to George Ambrose Michant, of France, for improvements in the production and application of heat, and in the manufacture of coke.]

This invention consists, firstly, in a new construction and arrangement of oven to be employed in the manufacture of coke; and, secondly, in a new mode of producing and applying heat to various useful purposes, arising from the peculiar construction of the oven, which is as follows:—It is well known, that the mode hitherto practiced for converting coal into coke, has been to place the coal within a single chamber, or oven, composed of fire-bricks, with an opening, or openings, at the top for the escape of the gases—the other portions of the oven and ash-pit being made air-tight by luting, or other known means, in common use; and the principal feature in this invention consists in constructing the oven in three or more compartments. The drawing accompanying the specification, exhibits three, which the patentee considers sufficient—such compartments being formed by brick partitions, extending from the back to front of the oven; and from the bottom to the crown thereof—thereby leaving each compartment distinct and separate from the adjoining ones; each of these is furnished with fire-bars, a furnace-door, and ash-pit; and the crown of each compartment has square holes, or openings, formed therein for the escape of gases, and other vapours, evolved from the coal under conversion.

The process is conducted in the following manner:—Each of the compartments, being charged with coal, and the fuel ignited, the furnace doors are rendered air-tight by luting, as usually practiced; and each ash-pit is furnished with the means of regulating or shutting off the atmospheric air. Now, let A, B, C, represent the three compartments, of which the middle one, B, is the largest, and suppose this one only to be charged with coal, it will appear evident, that the radiation of heat therefrom, during its conversion, will have the effect of heating the uncharged compartments, A and B; and as the object of this invention is, that conversion of the coal, in each of these compartments, may be carried on in regular succession—that is to say, by the time the last compartment is charged, the first one, A, will be ready to draw, which will be determined by the absence of flame at the top of the oven—and when this one is recharged, the second compartment will be in a fit state to be drawn and recharged, and in like manner the third one. Thus, it will appear evident, that the process will be conducted without intermission—at the same time, that compartment which contains the cold charge, will receive caloric from the side and crown of the adjoining compartment. The patentee states, that the quality of the coke thus manufactured, is superior to any other hitherto manufactured. In conclusion, he remarks, that he does not claim the application of the heat evolved from the oven (during the process of manufacturing coke) to any particular purpose, as he is aware that such has been commonly done; but he claims, as his invention, the forming of the oven in a series of chambers, and the new production and application of heat, consequent upon such construction.

Patent-office and Designs Registry, 210, Strand, June 27.

THE COPPER MINERS' COMPANY.—(From a Correspondent.)—Our readers will recollect, that, in consequence of the difficulties in which the Company of Copper Miners in England was placed during the monetary crisis last year, the Bank of England were induced to make a large advance of money, in order to furnish the means to carry on the works. For some time past the manufacture of iron has been carried on under this arrangement, in order to work up materials that had been so far prepared, and we are informed that the production amounts at present to several hundred tons of bar-iron per week. This iron has been pressed upon the market, particularly at Liverpool, without reserve, and has had a very decided influence in reducing prices lower than they would otherwise have fallen, and has thereby given great dissatisfaction to the trade. We are led to believe, at the same time, that it is more than doubtful if the assistance given by the Bank will prevent the works from being ultimately stopped; and, from the effect to which we have alluded on the market, it renders it very questionable whether it would not have been better to have left the concern to its fate in the first instance. It affords another proof of the gross mismanagement of a joint-stock company, and of the negligence of shareholders in not examining into the state of their affairs with the necessary degree of vigilance. The total loss of capital in the concern is said to fall little short of 1,500,000l. sterling.

GALVANISED IRON COMPANY.—We are requested to state, that this company's bill received the Royal assent in the House of Lords yesterday.

EASTERN COUNTIES RAILWAY.—Within the last few days a single branch line has been opened, which connects the East India Docks with the Eastern Counties Railway, and branches off just beyond the Barking-road station of the North Woolwich branch, and crossing the River Lee by a novel iron swing-bridge, enters the dock by the extensive pepper warehouses which the company have purchased. By this line, old Peterborough, goods may be removed, without break of carriage, from this important depot of East India produce, to the Mersey, Humber, Tyne, or any point in the manufacturing districts.

PRODUCE OF THE PRINCIPAL CORNISH COPPER MINES.

FOR THE QUARTER ENDED JUNE 24, 1848.

| Mines. | No. Tonnages. | Tons. | Amount. |
|------------------------------------|---------------|-------|-------------|
| Devon Great Consols | 3 | 4308 | £24,930 5 6 |
| Carn Brea | 3 | 2761 | 16,153 9 0 |
| Par Consols | 6 | 2467 | 14,877 4 6 |
| Great Consolidated | 3 | 2670 | 12,882 8 0 |
| Great United | 3 | 2608 | 9,863 15 6 |
| Fowey Consols | 6 | 1633 | 8,794 5 6 |
| Wheal Soton | 3 | 1493 | 7,282 11 0 |
| North Pool | 2 | 1745 | 6,931 6 6 |
| Wheals Prosper and Friendship | 6 | 1288 | 6,433 6 6 |
| West Caradon | 3 | 993 | 6,207 14 6 |
| South Caradon | 3 | 1021 | 6,164 11 6 |
| North Roskear | 1 | 957 | 4,765 0 6 |
| Tincroft | 3 | 1306 | 4,058 2 6 |
| East Wh. Crofty, Dudman, & Longel. | 2 | 996 | 3,746 12 0 |
| Stray Park and Camborne Vein | 2 | 999 | 3,724 19 0 |
| Tresavean | 3 | 1136 | 3,610 15 6 |
| South Wheal Francis | 3 | 558 | 3,137 17 0 |
| South Wheal Basset | 3 | 600 | 3,112 19 0 |
| Trevelick and Barrier | 4 | 685 | 2,970 8 0 |
| Treleigh | 3 | 396 | 2,251 3 6 |
| Perran St. George and Bolema | 2 | 683 | 2,135 19 6 |
| Bodfon United | 2 | 449 | 1,958 2 6 |
| Dolcoath | 2 | 467 | 1,879 5 6 |
| Conduarrow | 2 | 478 | 1,521 3 0 |
| Levant | 1 | 234 | 1,406 1 0 |
| Graham and St. Aubyn | 2 | 330 | 1,218 9 0 |
| Wheal Ellen | 2 | 212 | 1,174 11 0 |
| Great Work | 2 | 106 | 1,138 6 0 |
| Wheal Buckle | 3 | 392 | 1,092 10 0 |
| West Wheal Jewel | 2 | 397 | 1,018 0 6 |
| Trethellan | 2 | 368 | 1,015 10 0 |
| Wheal Tremayne | 2 | 200 | 927 5 0 |
| Marke Valley | 2 | 420 | 921 4 0 |
| Alfred Consols | 1 | 295 | 892 0 6 |
| East Pool | 2 | 289 | 888 11 0 |
| Pollice | 1 | 218 | 857 15 0 |
| North Wheal Basset | 2 | 172 | 857 2 0 |
| Holmshush | 2 | 188 | 806 14 0 |
| Wheal Sisters | 2 | 199 | 838 9 0 |
| Andrew and Nangles | 2 | 187 | 818 12 0 |
| Wheal Agar | 3 | 224 | 800 5 6 |
| South Roskear | 1 | 169 | 799 18 6 |
| Creeghebra | 1 | 193 | 797 16 0 |
| Wheal Mary Consols | 2 | 137 | 692 11 0 |
| South Wheal Fortune | 2 | 118 | 624 13 6 |
| Wellington Mines | 2 | 76 | 605 2 6 |
| West Wheal Treasury | 1 | 131 | 596 7 6 |
| Tywarthale | 1 | 228 | 554 6 6 |
| Wheal Clifford | 2 | 263 | 530 1 0 |
| Wheal Cliffort | 2 | 157 | 501 2 0 |
| Phoenix | 1 | 42 | 445 4 0 |
| Wheal Rodney | 2 | 192 | 443 5 0 |
| Wheal Jane | 1 | 166 | 385 9 6 |
| Wheal Gorland | 2 | 71 | 329 14 0 |
| Wheal Mary | 1 | 85 | 250 2 6 |
| Wheal Williams | 1 | 47 | 247 18 6 |
| Wheal Jewel | 1 | 86 | 231 4 0 |
| Wheal Henry | 1 | 54 | 217 7 0 |
| Botallack | 1 | 39 | 204 15 0 |
| Gwinnar Consols | 2 | 109 | 202 19 6 |
| Trenance | 1 | 15 | 200 9 6 |
| Wheal Tryphena | 1 | 16 | 192 16 0 |
| Wheal Harriet | 1 | 60 | 174 0 0 |
| Wheal Prudence | 1 | 57 | 170 7 6 |
| West Fowey Consols | 1 | 39 | 156 19 6 |
| Wheal Gurlin | 1 | 33 | 156 15 0 |
| Caradon | 1 | 29 | 155 12 0 |
| Charlestown | 1 | 13 | 148 17 0 |
| South Tolgus | 1 | 35 | 125 17 6 |
| East Wheal Agar | 1 | 22 | 123 15 0 |
| Wheal Vyryan | 1 | 24 | 120 1 6 |
| Wheal Busy | 1 | 58 | 119 4 6 |
| Polgoth | 1 | 11 | 116 17 6 |
| Wheal Brewer | 1 | 49 | 113 12 6 |
| Great Michell Consols | 1 | 57 | 109 13 6 |
| Gonenna | 1 | 14 | 107 16 0 |
| Lanivet | 1 | 43 | 101 1 0 |
| West Trethellan | 1 | 36 | 86 8 0 |
| Wheal Maiden | 1 | 31 | 85 5 0 |
| Wheal Rose | 1 | 12 | 79 4 6 |
| East Downs | 1 | 19 | 78 7 6 |
| Tokenbury | 1 | 26 | 70 17 0 |
| Copper Bottom | 1 | 8 | 68 0 0 |
| West Basset | 1 | 10 | 59 1 0 |
| Ting-Tang | 2 | 22 | 53 9 0 |
| Cook's Kitchen | 1 | 16 | 46 0 0 |
| Rose-in-Vale | 1 | 15 | 45 0 0 |
| Silver Hill | 1 | 25 | 38 5 0 |
| North Downs | 1 | 10 | 36 15 0 |
| Trenow Consols | 1 | 10 | 20 0 0 |
| Penarthall | 1 | 5 | 16 10 0 |
| Unity Wood | 1 | 5 | 15 17 6 |
| East Cribnis | 1 | 3 | 13 14 6 |
| Treslow | 1 | 12 | 9 0 0 |

TotalTons 40018 £187,770 14 6

JEFFERY'S MARINE GLUE.

It is now about six years since Mr. Jeffery obtained a patent for his marine glue; and the numerous experiments which have, at various times, been made, to test its powers, its advantages, and its economy, we have always fully noticed in the *Mining Journal* at the time. The length of time which has now elapsed since its first application having enabled the proprietors to aver, as practical facts, what all their former experiments only proved in theory—as it was impossible to tell what effect time and atmospheric changes would have—has induced them to take a temporary office in Cannon-row, for the purpose of submitting to the public specimens of the valuable effects of the marine glue, after years of service. We have inspected, at their office, part of the deck of the *Talbot*, and a portion of the mainmast of the *Circe* frigates, which were payed with the marine glue. After a period of five years' service, the paying the joints of the former remaining as when first put in, and expanding and yielding with the contraction of the planks, which have been also probably worn down an inch in stoning and cleaning, and the latter as sound as the day the mast was placed in the vessel; while the foremast, which was constructed in the ordinary manner, is rotten at the core, and expanding over a considerable portion of its interior. Its durability, superiority, and greater economy, over every other substance for caulking, paying, or as glue for joining timber in the formation of masts, and every other part of a vessel, is incontrovertibly established; and we sincerely wish we could, with as much satisfaction, record the fact, that the Government, who are, at present, the only gannets, and who are likely hitherto to realise a saving of many thousands per annum by its use, had awarded the patentees that liberal remuneration which is so justly their due. We are sorry to find such is not the fact; Mr. Jeffery and his partners, without attempting to push it forward into that general public use, which a little exertion would have secured for it, devoted the whole of their energies and their means to render it available to the British navy; and, as a proof of its complete success, the most flattering and disinterested testimonials in its favour have been given from every practical department in the Royal dockyards, from Lord Bloomfield, Commandant of the Garrison, Woolwich, Sir E. Codrington, Sir Francis Collier, Admiral Hyde Parker, the master shipwrights of the dockyards, and the commanders of many ships in the Royal Navy, in which it is affirmed to be likely to prove one of the most important discoveries for shipbuilding purposes of modern times. What remuneration will our readers believe they have received? Why, after an outlay of several thousand pounds, and the application of six years of their lives, the Lords of the Admiralty have awarded them nothing! absolutely nothing!—not even a sixpence for their travelling expenses, which, in the service alone, has been very considerable. Application after application for remuneration has been met by promises, by acknowledgments of its efficiency, and by non-performance. Mr. Jeffery's first claim was but 30,000l.—a sum little above half what the navy would save, in a single year, on a general adoption of the glue; and the only offer of anything like remuneration is to pay him at per ton of the glue used, which, from its great durability, would yield but a paltry sum towards anything like fair compensation for such a public benefit, and which the patentees have, we think very properly, rejected. Mr. Jeffery lowered his claim to 3000l. down, and 3000l. a year for four years, at the expiration of which time further remuneration to be considered. He has asked for a committee of investigation, and to be allowed an interview with the board, but all in vain; and there they are, apparently in the same position with regard to remuneration, as when they commenced operations six years ago, with that period of their lives wasted, and their resources ruinously reduced. Is the degrading slur upon our national character, that—through the conceit, the procrastination, or the capidity of our public bodies—men whose inventive genius most benefits the country are generally slighted and ruined, never to be effaced? Is it to go forth to the world, that England—a country raised to her present pre-eminence by her rapid progress in science and the arts—will, whenever possible to evade just payment, adopt the talent, experience, and perseverance of the most ingenious of her sons, and then tell them to get remuneration for their toil and outlay how and when they can? All honourable and honest feeling forbid it; and we do trust, that the gross injustice which the patentees of the marine glue appear to have sustained at the hands of the Government authorities in the marine department, will be speedily compensated for by ample remuneration; or that some liberal Member of the House of Commons will take up the subject, and obtain from the Government itself an explanation of the unjust, partial, and anomalous proceedings, which are daily being practised.

Original Correspondence.

THE RISE AND PROGRESS OF THE CORNISH STEAM-ENGINE.

BY JAMES SIMS, ENGINEER.

Sir,—I commenced engineering in the year 1811, at a period when the steam-engine was in a very rude state; and, from that time to 1814, little or no improvement in the mode of constructing the steam-engine took place, but was carried on just as left by Boulton and Watt, and their active agent, Mr. Murdoch. The increase of duty was, therefore, only just as follows, taking the three following years of 1812, 1813, 1814:—Average duty in 1812, 19.3 millions; 1813, 19.5 millions; 1814, 20.6 millions. In the latter part of 1814, Mr. Arthur Woolf erected one of his patent combined cylinder engines, and with great success, when compared with those of Boulton and Watt. Mr. Woolf's engine being so well known, it does not, of course, require an explanation from me. The principal feature in his mode of working was, that of using much higher pressure steam than had hitherto been used; and in order further to economise the use of it, and thereby economise the use of fuel in proportion, he worked the steam a second time in a larger cylinder—thereby carrying out the expansion principle of steam to a much greater extent than had been attempted by Boulton and Watt. In order to use the higher steam, Mr. Woolf was necessarily obliged to adopt a different form of boiler—the old waggon boiler not being strong enough to contain steam of such a pressure as was necessary for his engines. His boiler—the form of which has appeared in several publications—was of cast-iron, and was a quick generator of steam; but did not answer well in practice, in consequence of the expansion and contraction of the pipes, of which it was partly constructed, frequently breaking. This fact, together with the many attempts to work the engines more expansively with the old boilers, which were not found to answer for want of sufficient strength, led to the general adoption of Trevithick's boilers, which, as regards safety, and as a good generator of steam, has been found to be the best boiler hitherto invented. The duty of Woolf's engine having risen to 52.3 million pounds, lifted 1 ft. high by the consumption of one bushel of coal, and he having improved several Boulton and Watt engines, by causing them to work more expansively by using higher steam, awakened the whole of the Cornish engineers to a new era in steam-power; and many a sleepless night have I had with others in repairing the many breakages of engines and boilers, caused by the boilers being too weak for the steam attempted to be used, and the material of the engine not being strong enough for the concussion given by the sudden admission of much higher steam on the piston than was originally intended.

Amongst the many attempts to compete with Mr. Woolf's improvements was that of Trevithick's pole engine. This was simply a pole, similar to our poles used for plunger or forcing-pumps. The inventor considered that, by working with very high-pressure steam, making a longer stroke than usually employed, and expanding the steam, together with the simplicity and consequent cheapness of the engine, he would be able to equal, if not exceed, the duty obtained by Mr. Woolf. The constant exposure of this immense pole to the atmosphere at every stroke the engine made, the very high steam necessary, thereby causing frequent injury to the boilers, and the loss of that very important appendage to the steam-engine—the condenser—and, consequently, want of vacuum; and the benefit of the pressure of the atmosphere, soon put a stop to the use of this engine. In the year 1816, my father, having considered that Trevithick's pole connected to the Boulton and Watt engine—thereby making a combined cylinder engine of it—would be nearly, if not equal, to the Woolf's engine, entered into an arrangement with that gentleman for the use of it; and, having attached a pole to an old Boulton and Watt engine, he was not disappointed in his expectations, as may be seen by a reference to the *Monthly Reports of Steam-Engines* for 1817, which shows that Sims's engine, at Wheal Chance Mine, performed 49.9 millions; and Woolf's engine, at Wheal Abraham, performed 51.0 millions. Woolf's being a complete new engine, and Sims's being an old engine, altered, I considered, the duty—inasmuch as regards the principle of the engines—much the same. Several of these engines continued in use some considerable time; but the Boulton and Watt engine, having undergone several modifications in its construction, together with great care in its manufacture, and working with a much higher degree of expansion, accomplished by having stronger engines, and also having them of longer stroke and larger dimensions than hitherto used, improved the duty so much, that, in 1825, with an 80-inch engine, erected at Polgoth Mine, near St. Austell, by Sims and Son, the duty stood as high as 54.0 millions. About this time, Capt. Grose (an engineer of eminence in this county) erected a 60-inch cylinder-engine at Wheal Hope Mine; and having found, by some experiments he had made, that the clothing system, to prevent the radiation of heat, had not been carried out so far as to obtain the greatest benefit, he at once gave his engine a complete clothing with the best non-conductors then available; the result was, that the engine very far surpassed every other engine in duty—having, in 1827, reached 62.2 millions. About this time, Capt. Grose erected two new 80-inch cylinder-engines at Wheal Towan; and, by great care in the manufacture of the engine, simplicity of construction, together with great care in the arrangement of the pump-work, he attained the enormous duty of 87 millions—doing as much work with one ton of coal, in 1828, as was accomplished with four tons in 1815. No improvement of consequence in the Cornish single-power pumping-engine has taken place since that time. Some few engines have occasionally been reported higher—caused by working with a higher degree of expansion, or by having superior fuel, and by having the proper maximum of work to do; but it may be fairly said, that Capt. Grose brought the Boulton and Watt single-power pumping-engine, as used in Cornwall, to a state of perfection, which has received no further improvement—so far as regards duty—for the last 20 years. Although the duty of the single-power pumping-engine was not got to so high a state of perfection, there was room left for a very important improvement in the stamping and winding engines—the average duty of stamping-engines at that time being no more than about 20 millions; and that of the winding-engine much below. I, therefore, suggested the propriety of carrying out the same principle in those engines; and, in 1835, I erected a stamping-engine at the Charles-town Mines, near St. Austell, which answered my most sanguine expectations—having performed upwards of 60 millions.

Messrs. Hocking and Loom have carried out this principle in the winding-engine to a greater extent than any other party, and have realised a duty in just the same proportion. Having shown that there is a very great saving effected by the long-stroke expanding-engines, I think it my duty to point out some of the inconveniences attached to this mode of using steam-power.—1. As regards the pumping-engine, the strength of engine and pump-work must be increased in proportion to the rate of expansion; this, together with the increased length of stroke, causes considerable extra expense.—2. As the load of the engine increases by the increased depth of the mine, the engine, with boiler and pump-work, become weaker by age and wear; hence, when economy is most required, it is least attainable; and this is frequently shown in our best engines by the duty.—3. The power of the engine is less in proportion to the rate of expansion, because it must be evident that, at whatever portion of the stroke the steam is cut off, the power of the engine must be lessened in proportion.—4. The violent concussion given to the material in the engine and pump-work at every stroke the engine makes, and which is in proportion to the rate of expansion, frequently deranges the machinery, thereby causing expensive accidents, and long and expensive hindrances to the mine. These facts induced me, some few years ago, to turn my attention to some mode of carrying out the expansion of steam to equally as great extent, without so much danger to the material; and this I have done with my improved combined engine, where, for a given load, instead of the full force of the steam acting on the upper side of one piston only, it is in the combined engine for the same load divided—first acting on a small piston for the down stroke, and the same steam again acting on a large piston for the up stroke—consequently, giving the steam equal, or, in some cases, greater, expansion, without any danger to the material by concussion; and I would remark, that the steam, having first expanded in the small cylinder, again expands throughout the whole stroke of the large cylinder—gives as much expansion in a 6 ft. stroke as can be obtained by a 12-ft. stroke in the single-acting engine. I believe the manner in which this engine is constructed is well known; it has, of course, two cylinders, one fixed on the top of the other—the bottom cylinder being about four times the area of the top cylinder. For all small engines, it is not necessary to make two cylinders, but cast it in one—the bottom part being about four times the contents of the top one. This engine will then differ from the single-power pumping-engine, only by having the bottom part of cylinder larger than the top, and two pistons, instead of one; but with one piston-rod, and nearly all the other things, as the single-acting engine.

In pointing out the advantages of this engine, I do not claim a higher

duty, by a given quantity of coal, than can be obtained by a very long stroke, and highly-expansive Boulton and Watt engine; but I do claim a duty equally high, with a very much better application of the steam, as regards the general safety of the material, and also for increasing loads, as all mining engines are subject to; but, although I do not claim a higher duty with the combined engine, when compared with the long-stroke expanding engine, it is when put in competition with the double-power Boulton and Watt rotatory engines, working in the ordinary way, as in general use in factories, flour-mills, &c., throughout the kingdom, varying in length of stroke from 3 ft. to 6 ft., and without the benefit of working expansively, and also with marine engines, where the stroke is necessarily short—consequently, little benefit from expansion. The saving of fuel, when compared with these engines, is enormous, and which is shown in the following testimonial from Mr. Hawksley, an engineer of considerable eminence:—

"Nottingham, March 6th, 1848.—I have much satisfaction in reporting to you the excellent duty performed by the combined cylinder engine, manufactured by the Messrs. Harvey and Co., under your patent, and erected by me at the Coventry Water-Works. On a recent occasion, 1 ton of coal, weighed into the boiler-house, maintained the engine in action for 15 hours, while making 12 strokes per minute, in a double-acting pump, of 16-in. diameter, working under the pressure of a column 180 ft. high. This is equal to only 44 lbs. per horse-power per hour, instead of 10 or 12 lbs. per horse-power per hour, usually consumed by good engines of the ordinary kind. The coal used was very inferior to the Welsh, the Newcastle, or the best Lancashire. Had we employed fuel of a superior description, the consumption would certainly not have exceeded 34 lbs. per horse-power per hour. The engine, when up to her speed, drives the fly-wheel with perfect regularity. I have, therefore, no doubt of the applicability of your invention to manufacturing purposes. The results would be most valuable, both in regard to economy of fuel, and the consequent diminution of the nuisance of smoke; for, with the consumption of less than half the coals, there must, of course, be less than half the smoke evolved."

I have also a testimonial from Messrs. Mason, of Sudbury, in Suffolk, equally satisfactory, and which I beg to subjoin:—

"Sudbury Mills, Suffolk, November 4, 1847.—We have much pleasure in informing you, that our combined cylinder engine, on your patent principle, is giving very great satisfaction. It is now working four pairs of stones, and the consumption of coal per hour is under 70 lbs., of the middling quality. We are quite satisfied it is the best sort of engine in use at the present time."

I would now beg to say, that whether the saving named by Mr. Hawksley can be effected by the combined engine, the long-stroke expansive engine, or any other kind of engine; it is a matter of considerable importance to this great commercial country, where steam is so very extensively in use, that the matter should be investigated; and, if found correct, to be generally adopted. I have been informed, that in Manchester, and including a radius of 30 miles around that place, there are 4000 steam-engines at work; and I believe I am quite safe in saying, that the average consumption of coal is full 12 lbs. per horse-power per hour. I will suppose them to average 20-horse power each, and that they are consuming 8 lbs. per horse-power per hour above the engines referred to in the testimonials, and that the average time of working is 12 hours a day, and six days a week, it will then be found that it will amount to the astonishing quantity of 1,069,714 tons per year, which, at 5s. per ton, is 267,428*l*. I say again, that, whether it is a combined engine, or any other kind of engine, that will effect such an immense saving, the system fully carried out, would, in a commercial view of the matter, be of vast importance to this country.

In the marine engines, as now constructed, the expansion principle cannot be made available to any great extent, in consequence of the shortness of the stroke; the consumption of fuel, therefore, is very great. The combined engine, working wholly expansively in the large cylinder, I find the economy of fuel just the same in short stroke as in long stroke engines—as a proof of which, I have a letter, which I received this day from Ipswich, informing me, that the two combined engines, lately erected on the town mills in that place, are not consuming so much as 34 lbs. per horse-power per hour; the stroke of these engines is only 3 ft. 6 in. Combined engines would save 40 per cent. over the present marine engines, and might be employed with horizontal cylinders, or in any other position, which might be found most convenient.

In the present state of Cornish mines—I refer to their great depth, and the very low price of their produce—I think it the duty of every engineer employed in these mines to pay every attention to economy in the construction of the steam-engine—for, however simple they may be constructed, they are still very expensive articles. There have been lately some few engines erected, which shows there is a nearer approach to economy than heretofore; I refer to the inverted and direct-acting engines, which are far better, in point of economy and safety, for mining purposes, than the present lofty engines with their castles of houses—some engines having a main beam, or bob, of 25 tons, shaking the whole building at every stroke it makes; but there is still a more economical engine for mining, and other purposes, than the inverted engine—viz.: the horizontal engine. The economy of such engines must be very evident—not only in the first cost of engine and house, but also in the economy of material and fuel; and I am happy to find, that I am not the only one that has begun to adopt this plan, as I find from Mr. Wm. West, that he has three combined engines of my patent now making, each of them to be laid down horizontally. The objection to horizontal engines, has been the supposed wear of the cylinder and piston by means of the weight of the piston constantly bearing on the bottom side of the cylinder; but I find that practice proves it otherwise, and that the cylinder wears just as well as if vertical. This fact is accounted for as follows—viz.: the grease, or oil, with which it is lubricated invariably settles at the bottom, thereby causing the piston to be constantly moving in grease, or oil, and preventing any perceptible wear for many years. There may probably be a little more friction than in a vertical cylinder of the same size, but this is fully compensated, in the absence of a considerable amount of friction, which necessarily exists in the vertical engine more than in this. I would beg to remark, that whether the engine is a single cylinder, or my combined cylinder engine, I would, for all mining purposes, fix them horizontally. These combined engines are in use for the following purposes:—For pumping, stamping, winding, grinding copper ore, weaving cloth and silk, driving machinery, and for agricultural work. The number erected is 55, and there are five new ones now making.—JAMES SIMS: Redruth, June 22.

FORMULAS FOR PRACTICAL MEN.

SIR,—A propos to the well-meant article in the Journal of the 17th inst., by Mr. Brunton, of Chapelton, Leeds, I would observe, that although its formula and tabulated matter are nice approximations to that which the late Olinthus Gregory denominated "mathematics for practical men," yet they are far too complex for the class for whose use they are by the will of their contributor intended. My desire is to see our public journals replete with facts for the million, clothed in such guise that those to whom the binomial theorem is a sealed book, may understand and use their analogues without the necessity of abstract quantities and functions. The science of algebra, with its differential and supplementary calculus is the doctrine of pure and theoretical analogies, and in this sense of application ought its formulas to be used by those whose intention, like Mr. Brunton and others, is to develop to the "simple practitioner" the generalities of theory. MM. Prony and Hawksley have given their mathematical idealities of the laws of free and confined currents of fluids in the simplest terms; and, from those to whom those beautiful approximative formulas will always be useful, will for ever be due, and rendered the praise of such transcendental bequests; and, surely, Mr. Brunton, in the *Mining Journal*, and Messrs. Dredge and Cockle, in the *Mechanics Magazine*, will do much more service by giving this direction to their public contributions, than by attempting to elicit eulogy and mental prestige by a parade of ill-defined mathematical reasoning. What, I would ask, can be more frivolous than the attempts of Mr. Dredge, in the *Mechanics Magazine*, to prove by this parade of $x + y$, &c., that the assumptions of Goussé, based on the science of positive experiment, are untrue?

W. RADLEY, Ch. E.

City, June 20.

ATMOSPHERIC RAILWAY—NEW PROPELLER.

SIR,—Although it is quite probable, that the atmospheric mode of propelling trains on railways, when perfected, will afford us the means of travelling in safety at such a speed as might be termed "flying" in these go-a-head days, we should not consider it impossible, that, before it acquires that perfection, it may be superseded by other and better systems. Until very recently I had attained the opinion, that the atmospheric system, when perfected, would be "the nearest solution of the problem of artificial locomotion." I have discovered improvements, which will put this system in quite a new and better light, and which, in a few weeks, will be published, when the public will have an opportunity of judging of their merits; at the same time will be described a "new railway propeller," which, it is very likely, will supersede the atmospheric system. I may here mention, that a few days ago I had an opportunity of explaining these two inventions to a practical engineer, who is competent to form an opinion as to their merits. I first explained to him my improvements in at-

mospheric propulsion, which "he considered certain to supersede every system yet known." I afterwards explained the new propeller, which he at once declared to be "of a most important character, and, in his opinion, would be found in practice to be greatly superior to the atmospheric system." I feel thoroughly satisfied of the soundness of the principles upon which both these inventions, as well as several others which I have, are based.—JOHN WESTON: June 29.

[Our correspondent also adds, that he is prepared to explain these inventions to any respectable parties interested; and we would observe, that our columns are open for any further information, when Mr. Weston may deem it advisable to give it.]

CAST-STEEL.

SIR,—I have to thank "Ferreas" for exhibiting, in your last week's Number, a joint compendium of my observations upon cast-steel, and of his own blunders and want of information upon the subject matter of his remarks. Lead is an alloy of lead and silver, as produced from the ore; yet no one, without a previous explanation, would call lead a mixture of lead and silver. So in reference to blistered steel, I did not, without previously explaining my meaning, term it a mixture of steel and malleable iron. In all blistered steel, which has come under my notice, I have observed scales and particles of malleable iron; and, however small may be the ratio which they bear to the whole mass, yet there they are, and exist in mixture. Fusion never takes place, in the first instance, at the sides of the crucible; it invariably commences at the bottom, and the superincumbent matter sinks down upon the fused metal, and is gradually liquified. "Ferreas" has yet to learn, that a steel ingot may be porous without being cellular. The more perfect the quality of the steel, and the degree of its fusion, the more regular and complete will be found the porosity of its centre; whilst, on the other hand, when the fusion has been incomplete, the ingot will be found cellular throughout. Unless the centre of a cast-steel ingot is of a porous structure, it will burst, and give way under the tilt hammer; and if the structure be cellular, the ingot cannot afford a sound, and perfect tilted bar of steel. Porosity is caused by shrinkage—cellularity by imperfect fusion. Pure malleable iron, when cold, possesses a specific gravity greater than that of melted iron, or steel, and should, therefore, sink in such a fluid; but, unfortunately for "Ferreas," malleable iron swells to a great extent, even at a welding heat, and occupying more space, with the same amount of matter, its specific gravity is diminished, and it readily floats upon the denser medium. Thus, if we drop a piece of bar-iron into a fused mass of cast-iron, the bar will at first sink to the bottom; but as soon as it has acquired a heat sufficient to occasion its distension into the sponge-like mass, always presented by malleable iron when nearly entering into fusion, it will rise to the surface, and float there until fused. When refined iron, or honeycombed grey iron, is not well fused, and is, in that state, poured into an upright ingot mould, the ingot is cellular throughout, just as with cast-steel; and if cast-steel be poured into a flat mould, the surface only of the steel will be honeycombed, as is the case with refined iron and No. 2 pig-iron. The white iron of the blast-furnace does not exhibit honeycombs, because it is chiefly derived from iron which has not been carbonated, but only deoxidised; and iron, simply deoxidised, and in contact with earthy matter, enters into fusion at a low temperature, and with great facility. In order that malleable iron may be present, a portion of the materials must have imbibed before fusion that very slight amount of carbon which constitutes the distinctive characteristic of malleable iron. The strength of pig-iron depends so much upon an alloy of malleable iron, that processes have recently been patented for making iron of superior strength, by alloying carbonated cast-iron with wrought-iron. This is in effect done in many blast-furnaces where iron, of extraordinary strength, is produced, and as "Ferreas" observes, through insufficient carbonation of a portion of the furnace charge. The value of pig-iron depends upon the existing demand, and means of supply, for any particular purpose, not upon its absolute purity or completeness of reduction. Were Scotch pig-iron only producible at one blast-furnace, the make of that furnace would sell at a high rate, because no other iron is so well suited for particular uses. The metalloids also produce their effect upon the various qualities of pig-iron, and are often the influencing causes of many of its varieties of appearance and quality. I will detail an experiment, which may furnish matter of reflection for "Ferreas."

Four ounces of grey cast-iron were fused, at a temperature which fused also 1 oz. of wrought-iron, placed in a crucible beside that containing the cast-iron. The fluid wrought-iron was then poured into the fluid cast-iron, and the mixture was then emptied into a flat iron mould. The surface of the plate thus obtained was deeply honeycombed, and the plate itself was very tough and strong for cast-iron, bending a little before it gave way; the fracture was that of dark grey, honeycombed pig-iron. When the experiment was repeated, and the mixture exposed to an intense heat for an hour before pouring it, the resulting plate of cast-iron was smooth and exceedingly brittle, without a single honeycomb. In the first trial, the temperature was only sufficient to melt the wrought-iron, without occasioning extreme fluidity; in the latter trial, the temperature was sufficient to render the best charcoal rod-iron as fluid as water. In future, I hope that "Ferreas," in kindly furnishing compendiums, will not colour quite so highly—magnifying particles into masses, porosities into honeycombs, and his own want of observation into an affectation of superior knowledge.—ROBERT MUSHET: Coleford, June 26.

FREE TRADE.

SIR,—Your correspondent, "A," dating from Liverpool, cites a striking instance of the effects of free trade, which is, under the direction of the experimental philosophers of Downing-street, rapidly degrading Old England from her long sustained position of pre-eminence amongst the nations of the world. England possesses mines of zinc, adequate not only to supply her own consumption, but to meet the wants of other nations; yet in one year, 12,769 tons of foreign zinc are imported into England, and sold at a price which the British miner cannot meet. In short, the Government holds out a premium to foreign nations to undersell and ruin the English manufacturers of zinc, and to starve their workmen and miners. The copper trade affords another example of the reckless manner in which the interests of a large class of the community are sacrificed at the shrine of free trade. If copper and copper ores are admitted free of import from foreign countries, when they are found of a richer quality, and when they can be raised for a trifle under *Quaker* slave labour, as in Cuba, it must be evident to all impartial observers, that the county of Cornwall must, in a few years, cease to supply her quota of copper ores, simply from the impossibility of competing with the cheaper free trade ores. The political economist will, perhaps, object, that although particular classes of society, or certain branches of trade and industry, must inevitably be ruined by foreign competition, yet, on the whole, trade and manufactures must be benefited, because large foreign imports must entail equally large British exports. The fallacy of this opinion is clearly shown by the returns of the Board of Trade for the months ending 5th May, 1847-48, and exhibiting a falling off, in the latter month, of exports, amounting to 1,467,117*l*, as compared with those of the previous month. This falling off is at the rate of 17,605,404*l*. per annum; and if foreign imports are continued and encouraged by free trade measures, England must make up the balance against herself in money, already, by the insane policy of her rulers, so scarce, as to be inadequate to carry on one-fourth of the trade and enterprise of the nation. The Government is not contented with letting in a torrent of foreign commodities duty free, and thus starving British operatives, to maintain those of other nations, but they deny to this country a circulating medium of an extent commensurate with her wants—so that even those branches of industry which have not been annihilated, or are not in course of annihilation by free trade, are crippled and condemned to languish under the despotic folly of experimental statesmen. England is now upon the verge of becoming a nation of bankrupts, and paupers dependent for their food upon these bankrupts; or otherwise the seat of a civil war, for men will not *always* starve patiently. English mechanics and miners have now the alternative placed before them, either to starve at home, as paupers dependent upon the middle and upper classes, whom the incessant drain of means, furnished for pauper support, and falling off in trade, are fast assimilating with their pauper brethren, or they must seek abroad that encouragement denied to them at home by their oppressive rulers; and abroad they will teach the foreigner to supply his wants from home resources, and to improve and economise his manufactures—thus enabling him even more successfully to compete with the struggling and unprotected English manufacturer.

The true interests of this country lie in importing, as little as possible, of any commodity which can be readily produced, or manufactured, at home; and in the exportation, to the utmost extent, of those commodities which she produces at home, and especially such as are enhanced in their value by a large amount of operative labour bestowed upon them during the various processes of their manufacture. Should unrestricted free trade

and the Bank Charter Act continue their baneful influence for a few years more, England will be hereafter described in history as a nation whom the world could not conquer by force of arms, effectually subdued by an invasion of foreign commodities, bringing penury and destitution upon her operatives, discrediting and bankrupting upon her middle classes, and, finally, anarchy and civil war upon all ranks; whilst to accelerate her ruin, she was meanwhile denied, by her infatuated rulers, the privilege of a circulating medium, adequate to the requirements of her commercial transactions. Let the Bank of England issue 20,000,000*l*. of 1*l*. notes, which shall pass as a legal tender, and let each provincial bank issue, on an average, 10,000*l*. of 1*l*. notes, or about 20,000,000*l*. collectively, and a temporary season of prosperity may yet revisit this country; but to ensure its duration, British manufacturers and miners must also be protected against their foreign rivals, by suitable imposts laid upon the commodities offered for sale by the latter.

What tradesman, or shopkeeper, would allow his rival competitors to expose for sale, and vend their goods, upon his counter, at prices below those at which he could himself afford to dispose of similar articles? The British Government, however, have been, and are now, throwing open the British nation as one vast counter, upon which the untaxed foreigner may display his cheap wares; and out of the proceeds thus gained, by underselling the British manufacturer, the foreign operatives are fed and supported with the bread snatched from the mouths of English workmen.

Coleford, June 35.

ROBERT MUSHET.

MACHINERY—IS ITS INCREASE FOR GOOD OR EVIL?

SIR,—When we consider the extraordinary facilities which existing machinery furnishes for the creation of wealth—machinery which, in a thousand instances, has superseded the necessity of manual labour, and which, though very far from having arrived at its highest attainable point of perfection, is, at the present time, performing in one day that which in former time would have been the work of ages—when we consider this, and, at the same time, the wretched condition in which the great mass of the productive and really useful portion of the community exist, we are at a loss to know how it is that, with these extraordinary powers of production at our control, we are, nevertheless, in a far worse position than were our forefathers, to whom they had not been revealed.

One might naturally have been led to conclude that, in the same proportion as our powers of production were enlarged, so also would our means of enjoyment be increased, and hours of labour diminished. Reason could have led us to no other conclusion; but is it so? Bitter experience convinces us that the contrary is the fact. Instead of machinery diminishing the hours of labour, it has increased them, without proportionate remuneration for those who can obtain any employment; and, instead of placing the producers of wealth in comfortable dwellings, fed and clothed them, it has left them houseless, hungry, and naked; and how comes it that the results we witness are so opposite to what *must* have been anticipated? Could Watt or Arkwright have been inspired with the certain prospect of realising such a state of things? Shall we cease our admiration for genius, and resolve that science and machinery are at fault?—or shall we, with the priests, proclaim, that "it is in accordance with the Divine will of Heaven?" No; it is because civilisation has not advanced in a corresponding ratio with the development of science, or the progress of machinery. Had it done so, we could not now have been in the strange and anomalous position we are—thousands actually perishing from want, because our powers of production are too great. But can any one suppose it possible, that society can much longer pursue a course so insane and so diametrically opposed to its highest interests? To me it appears morally certain that it cannot. I, therefore, conclude that it will be infinitely wiser to inundate society with inventions and machinery, than to offer any futile attempts to stem their onward progress.

June 27.

JOHN WESTON.

COUNTY COURT WORKINGS.

SIR,—As your columns are always open to advocate the cause of the miner, I beg to lay before you a short outline of the working of the county courts in this district. Since the introduction of this, the most pinching, cruel, and oppressive law ever introduced into a civilised country, there has sprung up a set of extortionate small tradesmen who give credit, knowing that they will get paid, even if it should be at the sacrifice of a whole family. You are aware of the fluctuation of trade in the iron making districts, and the low rate of wages given during the periods of depression—a man having a large family to support out of his very limited means, finds it impossible to do so; and, unfortunately, contracts a debt with some shopkeeper, paying him, perhaps, 25 per cent. more for his goods than they are worth, and spending every penny of cash he gets for his work, but every day increasing his debt until it gets to a certain amount, and then he shall not have more than the cash he is able to bring will pay for; he is now worse off than he was at first, for he is paying 25 per cent. more than if he took his money to market—consequently, his family loses that much money on the amount of food it would purchase, and he finds he cannot live on the small amount of sustenance he can procure, but tries to amend it by pledging his little property that is available for that purpose, then his furniture is sold bit by bit, leaving only as much as will barely suffice for his actual wants, or very often renting a miserable apartment from some person nearly as wretched as himself; driven to the last extremity, he now takes his money, or part of it, perhaps, to market, and the relentless shopkeeper as surely issues a county court summons against him. The poor debtor pleads his cause as well as his ignorance of the English language will permit him, and begs for time; but the creditor, either by himself or attorney, makes out a good case, and the debtor is ordered to pay a sum he could not spare, even if he were making good wages—the consequence is, he is summoned again, to show cause why he does not pay; he again pleads inability, but this is no protection, he is committed to prison for 20, 30, or 40 days; he is taken to the police station as if he were a criminal instead of a poor debtor, whose only crime is his poverty; but the process is not complete—he is often handcuffed to the cart that conveys him to prison, and let it rain in torrents, he must go, and he is thrust into prison, drenched with rain, and famishing for food, not having had a morsel for 12 or 14 hours; his mind rent almost asunder at his own condition and that of his family, the latter have no alternative but to sell, as long as they have any, the remnant of his effects, and the last resource is the workhouse. Now, the country must support the debtor in prison, and his wife and family in a workhouse, at, perhaps, an expense four times greater than the original debt; but this even is not the end; for, when the poor debtor has satisfied the law so far, he goes out not in possession of a penny piece, often to carry him 20 or 30 miles to the place where he had employment, and where he left his little family, tired and weary he gets there, but another fills his place—the friend and partner of his bosom is not there to welcome him home, even if it were to poverty. Now I ask, what can that man's feelings be? What may he be tempted to do? I can hardly venture to anticipate. Now, Sir, this is not an overdrawn picture; but one of many that has come under my own observation, and one of every day occurrence, and very frequently for a debt of only a few shillings. Now, a felon who has outraged the laws of society—a man, perhaps, who has never honestly earned one shilling, is better cared for in conveying him to gaol, for he has sustenance found him on his journey, he has every encouragement to do well in future, his food is equal to the debtor's, he sleeps on a better bed in prison than the debtor does, and when he leaves the prison he is furnished with a sufficiency of cash to carry him to his place of residence, even clothes, &c., are given to him. Now, I do not for a moment object to all this; I rather admire the humanity of the course adopted, but I do deprecate the monstrous law that places a hard-working useful member of society (and who, probably, never before owed one shilling in his life) below the level of a common thief, or one of the pests of society. The sacredness of the Sabbath-day does not protect the poor debtor from arrest, for he may be taken from the midst of his family on the Lord's day, chained to a cart, and thrust into prison, merely because he owes a few shillings. Can this be long permitted in a country that boasts of the liberty of its people?—will the hardy and peaceable sons of Britain submit to this cursed intrusion on their homes and liberties?—will the rate payers, will the honest and fair dealing tradesman, pay for punishing their fellow-men in this most degrading manner to support the crimp that lives and hovers at the poor man's door, together with the expense and paraphernalia of county courts, their judges, clerks, &c., and the scum of society—the crowds of bailiffs who infest them, and fatten on the hard won money of the industrious miner or artisan. Let the tax payer consider that he suffers with the debtor, and pays his part for incarcerating an industrious man, tearing him from his family, breaking up his little establishment, and plunging him still deeper into debt, for the costs are enormous, doubling the original debt in a very short time, as was clearly stated in the House of Commons lately by H. Barklay, Esq., who says—"Out of 600,000*l*. collected by county court process, about one-half

has found its way into the pockets of plaintiffs, and 300,000*l.* for its recovery." This is, certainly, the most glaring fraud that ever was attempted to be thrust down the throats of people of a free country. If reform is not wanted here, what will ultimately become of the poor man?—shall he lie down, and let his more fortunate fellow walk over him, and crush his neck?—Britons, surely, will not long permit or suffer this monstrous deformity to exist. I can hardly believe, while I am writing these facts, that such a law was ever meant to be fulfilled by the promoters of it; but, seeing before me the effects of its operation on some of its unfortunate victims, I have been tempted to give a mere outline of some of its deformities, and only a mere item of the misery caused by it, and I do not take the matter up for the purpose of encouraging fraud, for I believe a small debt court to be wanted, presided over by judges, who ought to be paid liberal salaries, instead of by the amount of business done, and who would patiently investigate cases in both languages; the clerks, bailiffs, and attendants, to be paid salaries also instead of fees; imprisonment to be entirely done away with, except in cases of fraud, and those cases to be clearly proved by competent witnesses. Even in the present mode, if creditors were bound to support debtors in prison, instead of the public, we should soon find the benefit of it, as it would do away with giving credit at enormous profits, depending on the judgments obtained in county courts, for recovering the gross overcharge. I hope and trust this effort to show part of the workings of this iniquitous law will call forth the energies of some one better qualified than myself to detail its workings more effectually; I, however, hope that, humble as this attempt is, that it will not be lost sight of, for it is as interesting to the tax payer as it is to the unfortunate debtor. A visit to the county jail in this district will present different kinds of cases, and bear out all I have stated; the investigation of only one case will prove what the incarceration of one debtor only for 40 days costs the country, and will show the public what they pay towards supporting a poor debtor, to gratify the revenge of a persecuting creditor. It is notorious that the facility given to contract debts has become greater since the county courts were established than ever they were before. If the trouble I have taken will show some incarcerating creditor the folly of thinking a man can pay his debt in prison, and he will release him, I shall consider myself well paid; but I trust this is only a beginning that will end as every good man must desire, by annulling imprisonment for debt, as no man ever yet paid his debts in a prison house.

Pontypool, June 23. A WELL-WISHER TO HIS FELLOW MEN.

THE PATENT LAWS.

SIR,—I rejoice to find that the petition I am about laying before the Legislature has, through your columns, been the means of bestirring inventors and patentees, as regards the very imperfect state of the laws which more especially affect their interests—the Patent Laws—and when I find such distinguished individuals as your correspondent, Mr. Musket, interesting himself in behalf of the good cause, I think we may hopefully look forward to success; but, although it gladdens me to find him siding with reform, still I must be allowed to dissent from him, as regards the advisability of making the infringement of patent rights a legal felony—not on the ground, that he who filches away from the ingenious the production of his overwrought brain and unwearied skill, is not, in reality, as culpable as the outcast, whose only support is petty larceny, but simply on the ground, that patent property is essentially different from those kinds of property, the violation of which is a legal felony. If the violation of a patent right be constituted a felony, how difficult it would be to procure a conviction—for, felony being criminal, it becomes necessary to show, that the act was done with a criminal intention; and this, in nine cases out of ten, would prove an Arctean task, because, in very few cases, does an infringer copy the thing actually patented, but he makes some modification, or alteration; and who shall prove that such a one did not conceive his modified article to constitute a separate and distinct property? Again, he may have had some evidence present itself to him, which appeared to his mind to show, that instead of the patentee being the rightful owner of the invention, he only assumed that which was, in reality, public property; and, as in the carrying out of the criminal law of this country, the old adage—"Jus sumum saepe summa est maleitia"—possesses great weight, it would follow, that a very little doubt, on any point, would enable the pirate to escape from all punishment. Independent of these considerations, the proposed changes would not conduce to equity and good order, because it would leave the scrupulous at the mercy of any unprincipled adventurer, who should think fit to claim, under letters patent, that to which he was not entitled. Although I cannot advocate the enactment of felony against patent pirates, I should have no objection to see inserted in the Patent Laws, that provision of the Designs' Laws which makes it a public offence, subject to a penalty (payable to the proprietors of the copyright), to infringe another's right, recoverable at option in the superior courts of law, or before two magistrates—at the same time, leaving the action for damages open at election.

F. W. CAMPIN.
Patent Office, 210, Strand, June 28.

RAILWAY SIGNAL BETWEEN GUARDS AND ENGINE-DRIVERS.

SIR,—I have more than once urged upon the directors of railways, through your Journal, the necessity of placing the guards of a train in direct and easy communication with the drivers of the engine; and if the simple suggestion I threw out more than three years ago, in connection with this subject, had been generally adopted, many fatal accidents which have since occurred might certainly have been prevented. I now beg that you will allow me to direct public attention to the fact that Mr. Tattersall, of Newmarket, though apparently unacquainted with the details of the scheme I had proposed, has lately taken out a patent for a signal on the precise plan suggested by me (as described in the *Mining Journal* of the 10th inst.) It has been repeatedly tried, that gentleman informs me, and is found to succeed perfectly. It is now in daily use on the Eastern Union line from Bury to Colchester, has the merit of extraordinary simplicity and inexpensiveness, and has been approved by all practical men who have seen it. The invention simply consists of the adoption of a cord, spring, and winding apparatus passing through open rings upon the edges or tops of the carriages. Once more, then, I would earnestly press upon every railway direction in the kingdom the imperative duty of making trial of an invention involving little or no expense, and fraught with comfort and security to all railway travellers throughout the kingdom. The managers of the various companies can hardly hope to escape responsibility for future accidents, if it can be proved that these would in all probability have been averted by the adoption of the simple precautionary measure above described.—C.T.E. D'ORSAY: June 29.

SIMPLE AND EFFECTUAL PREVENTIVE OF BOILER EXPLOSIONS.—On this important subject we have received the following letter from a correspondent well qualified to offer an opinion on the subject, and to which we willingly give insertion:—"May I be permitted, through the medium of your Journal, to call the attention of ironmasters and proprietors of steam-engines, to a means that is available for the prevention of boiler explosions, by a mere outlay of two or three pounds. Now that public excitement is raised to its highest pitch by the melancholy and fatal accident which has so recently occurred at the iron-works of Mr. William Jeffries of Hart's Hill, near Dudley, wherein the lives of 10 of our fellowmen have been sacrificed, and their families left destitute, the occasion appears to me peculiarly fitted to direct attention to any practicable means of preventing similar calamities in future. There may, perhaps, be various means applicable to the purpose. One, however, has come under my special notice—namely, a "steam whistle"—made by Mr. Robert Best, of 10, Ludgate-hill, Birmingham. It is simple in its construction, very cheap in its application, and perfect in its operation. Touched with sympathy for the bereaved, I feel it a duty incumbent on me, on public grounds, to direct the especial attention of ironmasters and others to this ingenious contrivance, and to its applicability in all cases for the prevention of boiler explosions. Messrs. Barrows and Hall, of the Bloomfield Iron-Works, have already had them applied to all their boilers, from 20 to 30 in number; and it is to be hoped that their laudable example will be followed by all proprietors of steam-engines, and thus show their regard for their workmen by protecting them, as far as they can, from danger and death.—CAVENDO TUTUS: Dudley, June 19."—*Birmingham Journal*. [We think our readers would have been well pleased if "Cavendo Tutus" had given us some information as to the principle on which these steam-whistles act to prevent explosions. We insert the communication, as it may lead to information, but which is at present exceedingly vague, and appears somewhat like a puff.]

CURED BY HOLLOWAY'S OINTMENT AND PILLS. WOUNDS IN A LEG AFTER MORE THAN THREE YEARS' SUFFERING.—The wife of Mr. J. P. Springle, schoolmaster, of the town of St. Patrick, Grenada, had been suffering with an ulcerated leg for more than three years, which was so bad that it baffled the skill of all the professional practitioners in the island, who could not possibly heal it; after every other remedy had failed, Holloway's ointment and pills were resorted to, and by their powerful efficacy the wounds were soon healed, and a perfectly sound cure effected. These medicines excel all others in the cure of scrofula or king's evil, glandular, or other natural swellings. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

On the Winning and Working of Collieries.

BY MATTHIAS DUNN, MINING ENGINEER.

No. X.—Continued from the Mining Journal of the 24th June.

SINKING.

The results of the borings having satisfied the adventurer that a sinking might be advisable, the question is raised as to which of all the various plans ought to be pursued, and this decision is greatly to be governed by the circumstances of the case. If the coal lie at an easy depth from the surface attended with little water, and into which shafts may be sunk at a moderate expense, the position of the pit is not so material, because the distance to which the workings may extend will be limited, and in which case the pits should be in pairs—that is, without brattice as required for each pit in the deep collieries; therefore 7 or 8 ft. in diameter is quite ample, except a portion be required for a column of pumps, in which case the engine-shaft would require to be a foot extra in size.

It is in the deep collieries where the shafts require the expensive process of tubbing, and which, from the quantity of water met with in sinking, are necessarily very costly, that human ingenuity has been excited to construct one large shaft to answer for two or three coal drawing shafts, as well as for the engine pumps; and this is accomplished by means of wooden partitions, either formed of buntons clad with deals, or with 3-in. planks placed edgewise upon each other.

Some of the deep collieries in this district have been established upon various systems, and which many of them retain to the present day, notwithstanding the objections urged against their efficiency in point of ventilation and the great drawback that attends them with regard to wear and tear. To enable these shafts to be so divided, they were necessarily formed 14 or 15 ft. in diameter; the day is now past, however, for a repetition of this principle; therefore, all the recent workings have consisted of two or more shafts—indeed, the space contained in the shafts of some of these old collieries is admitted to be insufficient for passing the necessary quantum of atmospheric air so as to ensure the safety of the people.

In order to illustrate the sinking department upon a general scale, and also that the most approved method of accomplishing that object in this country may be fully appreciated, I will assume the depth of an intended winning to be 100 fms., with a pair of shafts each 10 or 12 ft. in diameter, prepared for pumping apparatus, requiring walling and tubbing, and all the appendages for efficient sinking with heavy water.

Before the sinking be commenced, it will be necessary to glance at the preparatory measures for carrying out such an undertaking as the completion of a shaft 100 fms. deep under contemplated difficulties; for since they must needs be wanted, it is prudent to be provided beforehand for all contingencies. First, there must be, in addition to the schedule of implements to be handled by the sinkers, wrights and smiths' shops, cottage houses, office, crabs, shearlegs, winding and pumping engines, ponds, fire-lamps, sinker's lodge, heapstead, and other accommodations according to peculiar circumstances. As the walling, before-mentioned, occupies a good deal of room, the first breaking of the shaft requires to be made 2 ft. larger than when finished; but, in the first part of the process, the alluvial deposit is secured by the insertion of wooden circular curbs at every 3 ft. or 4 ft., the said curbs being 4 in. or 5 in. square, and behind these curbs are built deals of suitable thickness nearly close together, which process progresses as fast as the shaft is excavated, until it reaches the stone head. The shaft being now reduced to its finished size, a circular walling is made to substitute the curb timbering, till it reaches a convenient height above the ground, the timbering being removed. The sinking to the stone head is not always accomplished without difficulty, for quicksands are but too common, and when of considerable depth, require both great skill, command of engine-power, and money; for no expense must be spared whilst the operation of passing through a quicksand is in progress. The usual and most effective mode of securing a shaft through a quicksand abounding with water is by piling—viz.: by providing a series of long planks, armed at the end with iron, driven down side by side round the shaft, and supported by inside curbs, followed up by successive inner circles supported also by curbs, until the solid ground be reached, the excavation of the shaft and the drawing of the water and sand proceeding at the discretion of the managers. Such was the system employed at the late deep winning of Dawdon, near Sunderland. In some cases cast-iron segments are bolted together, and sunk by an excess of pressure. This was done at the sinking of the first pit at Hutton Colliery, near Houghton-le-spring. On meeting with the sand they attempted to draw it off by engine-power, but were obliged to desist, as the ground for a considerable distance around sunk in. The sinking, however, was ultimately accomplished by means of cylinders of cast-iron, although at enormous expense.

In many parts of the country shafts are adopted of the form of a parallelogram, the timbering of which is very simple and efficient; but this form is altogether unfitted for contending with the difficulties arising from quicksand or water. When the shaft thus finished has reached the depth of 10 or 12 fms., it becomes necessary to prepare for ventilation by a brattice, either temporary or permanent. In some districts this is accomplished by means of air pipes or boxes, having at the top an air funnel with expanded mouth, which is turned round to a suitable position for receiving the wind; but this method is so very ineffective, that it is never practised in the north of England. By the brattice a spacious air course is commanded, which does not fail to carry off both carbonic acid and inflammable gases, as well as powder smoke, which would otherwise annoy the sinkers; for, in passing the chunks of rocks, as well as small seams of coal, blowers of inflammable gas are frequently met with.

If the ordinary brattice does not produce an adequate ventilation, it is rendered complete by building a spacious chimney, containing a furnace contiguous to the pit, and communicating a drift with one side of the brattice, that part of the shaft being covered at the top; this arrangement maintains the ventilation ample and regular. The brattice, as before remarked, is either constructed of buntons across the shaft, sheathed with deals, or formed of planks placed one above the other, their joints being rendered air-tight by slivers of wood or iron let into a groove in each corresponding plank. When the sinking has arrived at the stone strata, water, more or less, may be expected, and must be dealt with according to circumstances; for instance—Surface feeders are such as have a direct communication with the surface of the earth, and are therefore influenced by wet and dry weather, and all the varieties of the seasons. Partial feeders are such as gradually decrease after being opened, and in time become entirely exhausted. Permanent feeders continue for many years with but little diminution, finding their way through the interstices of the strata for considerable distances, and when stopped back it must be accomplished with such height of tub and strength of material as shall withstand the pressure at the highest level from which these waters arise. In the establishment of a deep winning, and wherein the quantity of water to be met with cannot be anticipated, it becomes imperative to stop back every material feeder, rather than to allow the water to fall to lower depths; therefore, upon a regular feeder being met with, measures ought to be taken to shut it back by means of tubbing, either of stone, wood, or iron.

Stone tubbing is merely common walling, but the foundation is made water-tight by means of grooves cut in the stone, as also the joints and backing filled with cement; which, when carefully executed, will answer a very good purpose for light pressures; but, the success of this operation is of too precarious a nature to meet with general application for important works—therefore wood or iron is always preferred. In all cases it is desirable that the foundation of the tub should rest upon a water-tight strata, except (which frequently happens) that one tub is merely inserted pro temp. for the better command of the water, with the design of adding underneath other joining tubs as the pit progresses. A suitable stone, therefore, having been obtained, preparation is made for adopting the tub; but, before proceeding further, it is necessary to explain the construction of the several tubs successively used in this part of the country in the deepest and most difficult sinkings.

Plank tubbing was used in the sinking of Hebburn, and other deep collieries, about the year 1790. It was constructed as follows:—The shaft was first widened for the length of the intended tub, if not already anticipated in the sinking. The ledge upon which the two foundation wedging curbs were intended to rest, and upon which the tub was to be built, was first levelled and polished with great care, its surface also being covered with flannel, white lead, or some other such substance. This preparation being ready, the first wedging curbs were laid, consisting of the best oak cut into segment, and 8 in. or 9 in. broad, each joint being lined with thin deal placed edgewise for the purpose of wedging; the curbs were then wedged throughout every joint, as well as between them, and also the space between the curbs and the rock, the whole being wedged with wood so long as a chisel would enter. Next followed the ordinary spiking curbs of similar dimensions, adjusted by a centre line to the same range, being of similar lengths but not so broad, and placed at intervals of from 18 in. to 30 in., according to the expected pressure. These curbs were wedged

sufficiently to sustain them firmly in their places to abide the spiking which was to attach them to the planking, and which constituted the tub. The planking usually consisted of 2½ or 3 in. deals, applied in lengths of 8 ft. or 10 ft., being first well planed, and their joints well bevelled to the circle of the shaft, after which they were fastened to the curbs by spikes formed of iron; but, in some of the deep collieries of the Tyne, the saline water was of so corrosive a nature, as completely to eat away and destroy these iron spikes, the replacing of which was attended with such incalculable labour and expense, as eventually to lead to the substitution of copper. This species of tubbing, when well executed, will bear a pressure of 100 lbs. to the square inch, and endure for many years in situations where the water is tolerably fresh; but, in collieries where the water corrodes the iron, effects the most ruinous and destructive follow, inasmuch as it is next to impossible to reach the spike holes after the shafts are fitted up with brattices and pumps, and the leakage of water under pressure (however small the space) becomes insupportable. A practical fact relative to this occurred at Hebburn Colliery, where the old plank tubbing, which had endured for many years, was entirely withdrawn, and cast-iron substituted, chiefly on account of the multiplied leakages and the difficulty of stopping them.

[To be continued in next week's Mining Journal.]

PROGRESS OF THE RAILWAY SYSTEM.

PROPOSED NEW MODE OF WORKING BRANCH LINES.

The Eastern Counties and the Bristol and Exeter Railway Companies have determined upon trying a new mode of working their branch lines, the object being to economise the large expenditure incurred in carrying on this portion of railway traffic. The proposition is to construct a light engine, a tender, and a passenger carriage, upon one frame. This peculiar construction is adopted for the purpose of securing the greatest possible adhesion with the driving-wheel of the engine, with the least possible amount of dead weight in the gross load of the train. The engine, tender, and passenger carriage, are to weigh about 10½ or 11 tons, and the carriage is to afford accommodation to 40 passengers. The engine is to possess sufficient power to take a second carriage, affording accommodation to 50 passengers, so that these light engines will be equal to the conveyance of 90 passengers. The running average velocity—that is, the speed to be maintained—exclusive of the time lost at the stations, and lost also in getting into speed when departing from and arriving at stations, is to be 40 miles per hour. The advantages that are held out by the adoption of light engines are a great saving in fuel, less wear and tear of machinery, and an important diminution in that most disagreeable of all items to railway managers—viz.: the maintenance of the permanent way, with the renewal of the rails. The employment of these light engines for branch traffic is considered to be infinitely more valuable upon branch lines to be constructed, and for the further development of the railway system.

We have on more than one occasion stated, that a very erroneous impression has prevailed among railway shareholders in reference to the remunerative character of branch lines, and expressed our belief not only that few of such lines are yielding a decent return, but that railway companies will find it to their advantage not to construct branch lines at a greater outlay than 10,000*l.* or 12,000*l.* per mile. The great fallacy has been that branch lines, though not profitable, so far as the local traffic over them is concerned, bring a large amount of traffic upon the trunk line. The fact is, that, with few exceptions, branch lines develop very little through traffic that would not be developed without them. This is not a new fact. It has long been well-known to most of the railway managers, and ought to have been known to all the railway directors of this country; and we are quite satisfied that a majority of our branch lines have been constructed for no other purpose than to issue, at a respectable premium, shares amongst the holders in the main lines of railway. We could illustrate this assertion by details of the traffic of branch lines, which, carried out at an enormous cost per mile, do not yield, say, 30 passengers per train; but the encouragement given by Parliament and by different Governments to competition, or their perfect indifference to a wholesome and correct extension of our railway system—a monopolising spirit of this company, or the aggrandisement of that chairman or particular section of railway men—have induced the construction of such lines; and the most injurious consequences have fallen upon, and will perhaps be permanently felt, by those shareholders who bought at high premiums, and have continued to hold. Another consequence is, that the public must content either to travel at low speeds, at long intervals, or pay high rates of fares for high velocities.

The greater number of branch lines are now found not to be profitable feeders; but, on the contrary, rather expensive ramifications of the railway system. Hence it is that railway companies are considering by what means they can carry on the traffic of such lines without detriment to the public, and with a large decrease of expenditure to themselves. It is with this view the engine-carriages to which we allude have been designed. The proposition for using these light engines for branch lines originated in the admirable working of the *Liliputian* locomotive, constructed for the use of the resident engineer of the Eastern Counties Railway, and respecting the very exaggerated statements about the performances, of which we offered some corrections 8 or 10 months ago. The *Liliputian* and her tender weigh 22 cwt.; and, in a trip that we recently made with her, she reached a maximum velocity of 33 miles per hour. This little engine has run about 10,000 miles with scarcely any repair. The result of its working induced Mr. Samuel (the resident engineer of the Eastern Counties line) to direct his attention to the employment of light locomotives for branch traffic; and the conclusions to which he arrived will be found in the paper read by him at the Birmingham Society of Mechanical Engineers, and fully reported in the *Mining Journal* of last week.

That a most important saving may be effected by railway companies, through the use of very light engines on branch lines, there cannot be a doubt; and the only question in reference to the determination of the Eastern Counties and Bristol and Exeter Companies is, whether an engine of 7 or 8 tons would not have ample adhesion on the rail to take the ordinary carriages, at a running average velocity of 40 miles per hour, and give accommodation to 30 passengers per train. Our own opinion is, that an engine of such weight would have abundance of adhesion on the driving-wheel for the above work, and that all the advantages proposed to be secured with the engine-carriages alluded to, might be accomplished with engines of 7 or 8 tons attached to carriages taken from the ordinary stock. This would, in some degree, simplify the marshalling of the branch traffic, as well as the repairs of the engines and carriages themselves. The only disadvantage would be the occasional addition of 2 tons to the gross weight of the train. The proposition for using these light engines for branch lines is, exceedingly heavy, exclusive of the expense of repairing and maintaining the permanent way. This latter item is an infinitely greater burden than railway authorities are willing to admit; and, in a series of years, the difference between the effects of unsteady engines, varying from 10 to 22 or 23 tons, and those of steady engines of 8 tons only, would, no doubt, show a great saving in favour of the latter. We say, steady engines of 8 tons weight, because the new branch line engines, now being constructed, will have the axle of the driving-wheel behind the fire-box, and the centre of gravity very low indeed. The consumption of engines, working the lighter branch traffic of this country, varies, perhaps, from 14 lb. to 20 lb., and upwards, of coke per mile. The new engines will, it is estimated, consume 7 lbs. of coke per mile; and we are informed, that the cost of working one of them, including coke, engine-driver and stoker's wages, wear and tear, interest on capital, and ordinary repairs, will amount to 6d. per mile only. But the great saving to be effected by the employment of light engines for working branch line traffic is to be found, as we have observed, in the very inexpensive rails and sleepers upon which they may be worked. It is stated, upon competent authority, that, exclusive of sand, a double line, with rails sufficiently heavy for the engines in question to work over, may be laid through a level country for 5000*l.* per mile, including working stock. If this be so, the railway system may, with the greatest possible advantage to the country, and with profit to railway companies themselves, be extended through many agricultural districts—the traffic of which could never be made to pay even a single line constructed and worked on the existing system. Such an extension of branch lines would tend to improve the cultivation of large portions of the country, and reduce the price of many articles of consumption.—*Morning Herald*.

IMPROVED METHOD OF CONSTRUCTING IRON VESSELS.—Having had some experience in the constructing of iron vessels, I beg to submit a plan which I think would be an improvement on what has hitherto been in use. You will be fully aware, that the practice in shipbuilding has always been to place the floor timbers of the frame across the keel, which is all right and proper enough for ships built of timber. And it would seem, from the practice of those engaged in the building of iron ships, that they have thought the same rule should be observed in building ships of iron—that is, by placing the angle irons across the keel to form the floors of the frame. The properties of iron, however, being so different, it by no means follows, that we should adhere to the same rules. The plan I submit for consideration is to form the keel and kelson of plate or bar-iron in one or two breadths, from 1½ inch to 2½ inches in thickness, and from 20 to 24 inches deep, and then to form the floors of angle iron in two lengths, and turn the ends of each up the side of the kelson, and connect them together by rivets through the kelson from side to side. The floor plates also should be in two lengths, which being rivetted to the floors, the two sides of the ship will be connected together, equally as well as by the old custom. By this plan, also, there will be formed as strong a back-bone as can be desired, and I think far superior to that now in use (as the connection with the keel and kelson and floors now in practice is not very efficient). Also, by this plan, the two sides are made completely water-tight from each other; and if it were desired, by continuing the kelson upwards with a thinner material, the ship can be subdivided into fore and aft compartments in addition to the thwart ship bulkheads. It will also be much easier to make the cross-section compartments water-tight, with the floors and kelson formed after this plan, than it is by any now in use. And by turning the angle with a round corner at the garboard, it will form an excellent water-course fore and aft, from bulkhead to bulkhead.—ROBERT FOWLES: Lloyd's Register of British and Foreign Shipping, North Shields, June 5.

ENGLISH LOCOMOTIVE ENGINES.—Mr. A. C. Tarry, writing from Lucca, to his friends in England on the 31st May, says:—"It gives me much pleasure to inform you that, during the war here, we have been much indebted to the manufacturers of England for locomotive engines, the transit of so many soldiers, requiring their constant use night and day, and the Yankee engines we have here requiring continued repairs. Since I came here an engine made by Messrs. Gouge, Brothers, of Manchester, has run the unprecedented number of 81,000 miles, without requiring a sixpence of expense in that way, with the exception of furnace bars, which were speedily rendered useless, from the softness of the material used in their construction."—*Gateshead Observer*.

CHESTER AND HOLYHEAD RAILWAY.—OPENING TO HOLYHEAD.—We are informed that the portion of the line from the other side of the Menai Straits to Holyhead is likely to be opened on the 1st of August next.

PUBLIC APPEAL.—RECENT AWFUL EXPLOSION AT HART'S HILL, BETWEEN BRIDLEY HILL AND DUDLEY. TEN MEN KILLED.

The CONTRIBUTIONS of the charitable and humane are earnestly solicited in behalf of the RELATIVES, WIDOWS, ORPHANS, &c., of the SUFFERERS from this frightful and distressing ACCIDENT, which took place in the consequence of the bursting of a large boiler, at the works of Mr. Jeffries, at Hart's Hill, between Bridley Hill and Dudley; whereby the works were reduced to a mass of ruins, and the following persons were killed or injured—viz.:

1. JOSEPH POTTER, of Bridley Hill, aged 30, leaving a wife and five children, of whom three are unable to walk—one being a cripple, and the wife having been confined less than a fortnight before.
2. SAMUEL ROGERS, of Merry Hill, aged 43, leaving a wife and seven children, and the wife near her confinement.
3. DAVID NEWTON, of Bridley Hill, aged 45, leaving a wife and eight children, of whom there are five under 13 years of age.
4. EDWARD JEFFRIES, of Bridley Hill, aged 25, single man, but the chief support of his mother, who is a widow, with two children.
5. THOMAS JEFFRIES, of Dudley Port, leaving a wife and one child.
6. WILLIAM WASSALL, of Bridley Hill, single man, but having a sister partly dependent on his earnings.
7. JAMES JEFFRIES, of Stourbridge, single man, his father and mother very destitute, and dependent on his earnings.
8. EDWARD MOORE, of Stourbridge, leaving a widow destitute, no children.
9. THOMAS COLLINS, of Merry Hill, aged 18, his father and mother partly dependent on his earnings.
10. JOHN JEFFRIES, Hart's Hill, wife and one child.

- INJURED.**
1. AMBROSE CARTWRIGHT, of Bridley Hill, very seriously burnt—his father a cripple—likely to recover.
 2. FRANCIS PRICE, of Woodside, unable to work.
 3. WILLIAM ROUND, of Woodside, two ribs broken.
 4. RUTH LILLEY, of Holly Hill, aged 14, burnt on the head.
 5. WILLIAM JOYCE, of Bridley Hill, single man, hurt.
 6. JOHN GRIFFIN, of Spring's Mire, burnt badly, having a wife and one child.
 7. THOMAS TIMMINS, of Hart's Hill—with two children—burnt—lost his hearing.

A Committee has been appointed, for the Management of this Fund, consisting of the following Gentlemen—viz.:

| | |
|--------------------------------------|--------------------|
| The Rev. R. HARRIS, M.A., Incumbent. | Joint-Trustees |
| Mr. JOSEPH MOORE, Churchwarden. | and |
| Mr. BENJAMIN GREEN, Treasurers. | |
| Mr. RICHARD WILLIAMS | Rev. J. PARSONS |
| Mr. EDWARD OAKES | Mr. P. T. KEMPSON |
| Mr. JOHN DAVIS | Mr. JOHN GRIFFITHS |
| Mr. REUBEN PLANT | Rev. J. ROUGHT |
| Rev. W. L. COX | Mr. HUDSON |
| Mr. JOHN PRICE | Mr. S. WILLIAMS |
| Mr. PETER HARRIS | Mr. JUKES |
| Mr. JAMES WILLIAMS | Mr. GROVE |
| Mr. JAMES WHEELER | Rev. J. HOLLINS |
| WILLIAM S. WHEELER, Esq. | Mr. FORD. |
| JOHN WHEELER, Esq. | |

Contributions will be thankfully received by the Treasurer, or any of the committee; and also at the various banks and principal inns, in Birmingham, Dudley, Wolverhampton, and Stourbridge, where books or subscription cards will be left.

The following Contributions have been received—viz.:

| | | |
|--|------------------------------------|--------|
| Collections at Bridley Hill Church on Whit-Sunday, including—Sent by | Richard Smith, Esq., Dudley .. | £5 0 0 |
| Lady Ward .. | J. G. Bourne, Esq., Dudley .. | 3 3 0 |
| Rev. T. L. CHURCH .. | Mr. Paskin .. | 0 5 0 |
| Joseph Bennett, Esq. 5 0 0 | Messrs. Fellows and Co. .. | 2 2 0 |
| W. Matthews, Esq. 5 0 0 | Mr. James Smith .. | 1 0 0 |
| C. Cartwright, Esq. 2 0 0—52 5 6 | Messrs. Barrows and Hall .. | 5 0 0 |
| Collection at Hart's Hill Chapel .. | Messrs. Evers and Son .. | 5 0 0 |
| Wm. Robinson, Esq., Dudley .. | Mr. Thoburn .. | 0 10 0 |
| Collection at the Wesleyan Chap., | Mr. Clowes .. | 0 10 0 |
| Bridley Hill .. | Mr. Cole .. | 0 5 0 |
| Ditto at the Wesleyan Chapel, | Mr. Thomas Hill .. | 0 5 0 |
| Bridley Hill .. | Rev. W. Dalton .. | 0 2 6 |
| Ditto at Quarry Bank Church .. | Lily of the Valley Lodge of Odd | 1 0 0 |
| James Foster, Esq. .. | Fellows, Stourbridge .. | 1 0 0 |
| Messrs. Wheeler & Co., Brettle- | W. Robbins, Esq. .. | 10 0 0 |
| lane .. | Mr. Silvers .. | 1 0 0 |
| Mias Wheeler .. | Mr. R. Barney .. | 1 0 0 |
| Rev. E. Harris .. | Mr. J. Wheeler .. | 1 0 0 |
| H. H. Foley, Esq., M.P. .. | Mr. J. Williams .. | 1 0 0 |
| Messrs. Brown and Frost .. | W. B. Collins, Esq. .. | 1 0 0 |
| Mr. Joseph Moore .. | Mr. J. Stevens, sen. .. | 0 5 0 |
| Mr. P. T. Kempson .. | Mr. H. Alden .. | 0 5 0 |
| Mr. John Price .. | Mr. Corns .. | 0 2 6 |
| Mr. R. Williams .. | Mr. John Scriven and workmen .. | 0 15 0 |
| Mr. S. Hudson .. | Hunt and Arrowsmith, Worces- | 2 0 0 |
| Mr. S. Williams .. | ter Chronicle .. | 2 0 0 |
| Rev. W. L. Cox .. | J. Tenny, Esq., Birmingham Journal | 2 0 0 |
| Mr. Peter Harris .. | Mr. Ford .. | 1 0 0 |
| Mr. Isaac Kempson .. | Messrs. Plant and Fisher .. | 5 0 0 |
| Court of Foresters (2254) .. | Aria's Birmingham Gazette .. | 3 3 0 |
| Mr. W. W. Hall .. | John Roberts, Esq. .. | 2 0 0 |
| Mr. Newbold .. | Mr. E. Blundell .. | 1 0 0 |
| Props. of the Ten Towns Messenger | Mr. John Parkes .. | 1 0 0 |
| H. P. Parkes, Esq., Dudley .. | The Mining Journal .. | 3 0 0 |
| Rev. C. Girdlestone and friends .. | Smaller contributions .. | 1 3 4 |

PATENT GALVANISED IRON AND WIRE ROPE WORKS.

MILLWALL, POPLAR.
ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD OF GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

GEOLOGY.—Persons wishing to become ACQUAINTED with this interesting BRANCH OF SCIENCE, will find their STUDIES greatly FACILITATED by means of ELEMENTARY COLLECTIONS, which can be had at TWO, FIVE, TEN, TWENTY, or FIFTY GUINEAS each, arranged and sold by Mr. TENNANT, 149, STRAND, LONDON.

A COLLECTION for FIVE GUINEAS, which will illustrate the recent works on Geology, contains 300 specimens, in a mahogany cabinet, with five trays—viz.:

MINERALS which are the components of rocks, or occasionally imbedded in them—Quartz, agate, calcined, Jasper, garnet, zeolite, hornblende, augite, asbestos, felspar, mica, talc, tourmaline, calcareous spar, feldspar, selenite, baryta, strontia, salt, sulphur, plumbago, bitumen, &c.

METALLIC ORES.—Iron, manganese, lead, tin, zinc, copper, antimony, silver, gold, platinum, &c.

ROCKS.—Granite, gneiss, mica-slate, clay-slate, porphyry, serpentine, sandstones, limestones, basalt, lavas, &c.

FOSSILS from the Lias, Llandovery, Wenlock, Ludlow, Devonian, carboniferous, lias, coalite, wealden, chalk, plastic clay, London-clay, and erag formations, &c.

Mr. TENNANT gives private instructions in Mineralogy, with a view to facilitate the study of Geology, and of the application of Mineral substances in the Arts, illustrated by an extensive collection of specimens, models, &c.

ABERDEEN RAILWAY.—Arrangements are in progress which give good reason to hope that the necessary funds for the completion of this railway will soon be obtained; and that the line will be opened to Stonehaven in September, and to Aberdeen early in January next. We understand that there are about 8000 people employed at the south end of the works.

EDINBURGH AND GLASGOW RAILWAY.—The Campsie branch of this line was officially examined, on Wednesday last, by Capt. Symonds, preparatory to its being opened for passenger traffic.

GREAT NORTHERN RAILWAY.—The works of this undertaking are progressing satisfactorily. A communication has been effected between the goit under the Baby-road and the works in the Carr. The company are making arrangements with the trustees of the Doncaster and Tinsley-road, for the erection of the bridge, and the work will be commenced as speedily as possible. The junction between Stockbridge and Doncaster is rapidly progressing. Should no further obstacle arise, there will be no difficulty in completing the line by the 5th of August.—Doncaster Chronicle.

GREAT SOUTHERN AND WESTERN RAILWAY (IRELAND).—The works on the portion of this line, extending from Cork to Mallow, are proceeding with great activity. Some of the embankments are of a most stupendous description. One crosses a ravine near Blarney, at such a height that objects on the top of it are considerably diminished to the sight. Looking at its immense elevation, one is not strongly pre-possessed in favour of the security of railway travelling. To an unprofessional eye, the base of many of the embankments would appear scarcely well enough to support such a weight on the summit as that of a full train in motion. The regularity and solidity of those works must have the effect of improving the skill of the labouring population in the districts through which they extend; but it is to be regretted that neither caution for their own safety, nor the example of casualties which have happened to others, has prevented the continued occurrence among them of dangerous or fatal accidents.

LONDON AND NORTH-WESTERN RAILWAY.—A new eight-wheeled engine of Stephenson's, with outside cylinders, has just been put on the London and North-Western Railway. It is said to be doing its work admirably, and runs with great steadiness.—Railway Record.

SOUTH YORKSHIRE RAILWAY.—The works of this company present a very forward appearance. The great embankment at Wismouth is progressing satisfactorily, whilst the works at Conisborough, Mexborough, and Swinton are in an equally forward condition.

RAILWAY LITIGATION.—The Great Western Company have, at this moment, a mass of law suits of serious moment to the shareholders—namely, Ranger's, Mackintosh's, and other contractors, for the balance of their accounts of nearly 1,000,000, for making the original Great Western line in 1837; & also with Kent, Parker, and other carriers, as to the legality of their charges for carrying, involving some thousands; actions by the sufferers from the late accident at Sharnham, which are suspended till the trials of the men committed; and a threatened resistance to their charges, until they are reduced nearly one-fourth, according to the statutory restrictions.—Railway Record.

FOURDRINIER'S PATENT SAFETY APPARATUS, for PREVENTING ACCIDENTS IN MINES AND OTHER PLACES, WHEN THE ROPE OR CHAIN BREAKS.

By the ADOPTION of this INVENTION the LIVES of the WORKING MINERS may be PRESERVED, and the PROPERTY of the MINE OWNERS PROTECTED from the serious consequences of either of the following accidents—viz.:

1. From the men, or the load, being precipitated to the bottom of the shaft when the rope or chain breaks; for this case the apparatus is self-acting.
2. From either the men, or load, being drawn over the pulley; in this case, also, the apparatus is self-acting.
3. From the fearful consequences to men or load of a "whirl," or run; in this case the result is equally certain.

A COAL PIT, with the SAFETY APPARATUS ATTACHED to the CAGE, is daily at WORK near BURSELEM, in the STAFFORDSHIRE POTTERIES.

To inspect the apparatus, or to obtain any further information, application may be made to Mr. Edward N. Fourdrinier (the patentee), Cheddleton, near Leek, Staffordshire; or to Mr. Joseph Fourdrinier, 9, College-place, Camden Town, London—who are prepared to GRANT LICENSES for the USE of the PATENT.

PATENT FLEXIBLE INDIA-RUBBER PIPES AND TUBING, for Railway Companies, Brewers, Distillers, Fire-Engines, Gas Companies, Gardening and Agricultural purposes, &c.

THE PATENT VULCANISED INDIA-RUBBER HOSE-PIPES are made to stand hot liquor and acids, without injury—do not become hard or stiff in any temperature (but are always perfectly flexible); and as they require no APPLICATION of oil or dressing, are particularly well adapted for Fire Engines, Pumps, Gas, Beer-Brewing, Gardens, and all purposes where a perfectly Flexible Pipe is required.

Made all sizes, from 1-inch bore upwards, and of any length to order. The hose is made of India Rubber, fitted with brass-taps, Copper branch and Rose's complete, ready to be attached to pumps, water-batts, or cisterns.

Sole manufacturer, JAMES LYNE HANCOCK, Goswell Mews, Goswell-road, London.

N.B.—Vulcanised India-Rubber Washers, of all sizes, for joints of hot-water and steam-pipes, and Vulcanised Sheet Rubber, any thickness, for all kinds of joints, and other purposes.

PATENT ALKALI COMPANY'S IRON PAINT.—This PAINT, now first offered to the public, is the PRODUCT of a PATENT PROCESS, and possesses VALUABLE and PECULIAR QUALITIES, not otherwise attainable.

Its colour is a purple-brown—it is perfectly innocuous—in far more durable than lead paint, and two coats are fully equal to three of any other paint. A single coat will be sufficient to demonstrate this. It dries rapidly, and its durability is very great.

From its chemical composition, it is especially, and above all other paints, adapted to covering iron; also wood, and stucco, or brick walls. The peculiar oxidation of the base of this paint makes it impossible that further change should take place in its composition. Its identity with iron secures it from galvanic action, so injurious to the durability of lead paints on iron work. It has been exposed on shipping to the action of sea-water, and the sulphuretted hydrogen, so prevalent in sea-ports and tidal harbours, for three years, without change.

Its cheapness and strength render it admirably adapted for iron railings, farm buildings, and shipping. It will also cover creosoted timber. Price, by the ton, £30, delivered in London. All orders to be addressed to the office of the company, 20, Fenchurch-street, London; where testimonials may be seen as to the value of the paint.

EVANS, BROTHERS, Agents.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, No. 2, Moorgate-street, London, where pamphlets, descriptive of the invention, may be had; at the office of the Mining Journal, 26, Fleet-street; and through any respectable bookseller—price 6d.

STEAM TO INDIA AND CHINA, via EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS TO CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th; and from Suez on or about the 10th of every month.

For rates of passage-money, plans of the steamers, and to secure passages, apply at the company's offices, No. 122, Leadenhall-street, London.

NOTICE TO SHIPPERS OF GOODS AND PARCELS per PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY'S STEAMERS TO INDIA AND CHINA.—GOODS and PARCELS, sent direct to the company's Parcel-office, at or before 6 P.M. on the 17th of each month, are FORWARDED at less cost to the shipper than when sent through any intermediate channel. Cases must not exceed 112 lbs. weight each for Aden, Ceylon, Madras, Calcutta, and China; and 40 lbs. each case for Bombay. No package for India and China can, under any circumstances, be shipped at Southampton, unless it be cleared through the Custom-house, and placed alongside the steamer by noon on the 19th of each month. Detailed particulars can be obtained on personal application or by writing.—Parcel Department, 122, Leadenhall-street, May 13, 1848.

CALEDONIAN RAILWAY COMPANY.—LOANS ON DEBENTURES.—TENDERS OF LOANS ON DEBENTURE BONDS are now RECEIVED in sums of not less than £500, for any number of years not exceeding five. Interest to be at the rate of 5 per cent. per annum, payable half-yearly, in London, Edinburgh, Glasgow, or in any currency bank.

Tenders to be addressed to this office, giving full name and address of lender.—Parties may also communicate with Messrs. Foster and Braithwaite, 68, Old Broad-street, London. By order, D. RANKINE, Treasurer.

Caledonian Railway Office, Edinburgh, Feb. 25, 1848.

SHREWSBURY AND BIRMINGHAM RAILWAY COMPANY.—LOANS ON DEBENTURES.—The directors of the SHREWSBURY AND BIRMINGHAM RAILWAY COMPANY are prepared to RECEIVE TENDERS OF LOANS, in sums of not less than £500, to be secured on the company's debentures.

By order, GEORGE KNOX, Secretary. Offices of the Company, 3, Moorgate-street, London.

SOUTH AUSTRALIAN BANKING COMPANY.—(Incorporated by Royal Charter.—At the Seventh Annual General Meeting, held at their office, 54, Old Broad-street, on Tuesday, June 27, 1848, the following resolutions were adopted—viz.:

1. That the report of the company's operations, as now read, be adopted for the Seventh Annual Report of the South Australian Banking Company, and printed and circulated under the direction of the court of directors; also, that the accounts of the company's affairs, to the 29th May last (as now submitted), be approved.

Moved by E. Divett, Esq., M.P., seconded by R. Foster, Esq.—

2. That the recommendation of the directors to declare, for the ensuing year, a dividend of 25 per cent. per annum (clear of income tax) on the paid-up capital be adopted, and that they be authorised to pay the same half-yearly, as before.

Moved by W. J. Tilley, Esq., seconded by E. W. Smith, Esq.—

3. That William Chippendale and James Ruddell Todd, Esqs., be re-elected as directors, and John Brown and Felix Ladbroke, Esqs., as auditors of the company.

Moved by J. Brown, Esq., seconded by W. Grant, Esq.—

4. That the thanks of the proprietors are eminently due, and are hereby given, to the chairman and directors, for their great attention to the concerns of the company.

Moved by E. Divett, Esq., M.P., seconded by J. R. Mills, Esq.—

5. That the best thanks of this meeting be given to the local directors at Adelaide, and to the manager, E. Stephens, Esq.; also, to the London manager, E. J. Wheeler, Esq., for their constant exertions for the company's interests.

Moved by W. J. Tilley, Esq., seconded by H. C. Watson, Esq.—

6. That the thanks of this meeting be given to the auditors, J. Brown and F. Ladbroke, Esqs., for their valuable services. EDMUND J. WHEELER, Manager.

SOUTH AUSTRALIAN BANKING COMPANY.—(Incorporated by Royal Charter)—DIVIDENDS.—The HALF-YEARLY DIVIDEND, due the 30th inst., at the rate of 5 per cent. per annum (clear of income tax), on the paid-up capital, will be PAYABLE at the company's offices, 54, Old Broad-street, London, on Saturday, the 15th July next, and every subsequent day, between the hours of Eleven and Three o'clock.—The transfer books of the company will be closed from the 1st to the 8th of July.

By order of the court, EDMUND J. WHEELER, Manager.

SOUTH AUSTRALIAN COMPANY.—At the Twelfth Annual General Meeting of proprietors, held at their offices, 4, New Broad-street, on Wednesday, the 28th June, 1848.

J. RUDELL TODD, Esq., in the chair. The following resolutions were unanimously adopted—

1. That the report of the company's operations, as now read, be adopted for the twelfth annual report of the South Australian Company, and printed and circulated under the direction of the board; also, that the accounts of the company's affairs to 29th April last, as now submitted, be approved.

Moved by the Rev. Thomas Timpon; seconded by Edward William Smith, Esq., and carried with one dissentient.

2. That the recommendation of the directors to declare for the current year a dividend at the rate of 12 per cent. on shares paid up, be adopted; and that they be authorised to pay the same, one half on the 29th July, and the other on the 29th January next.

Moved by George Fife Angus, Esq.; seconded by Charles Roberts, Esq.—

3. That Edward Divett, Esq., M.P., John Whetton, Esq., who retire by rotation, be re-elected directors; that Thomas Russell, Esq., be appointed a director in place of the late Henry Wymouth, Esq.; and John Baxley White, Esq., and W. Richards, Esq., be re-elected auditors.

Moved by George Miller, Esq.; seconded by Mr. Baylie Cullerene.

4. That it is the opinion of this meeting, that the shareholders should be called together twice a year, for the purpose of hearing such information relative to the affairs of the company as may have been received by the directors, and that the next meeting shall be held on Friday, the 29th December next; and that the directors be requested to call such meeting accordingly.

Moved by John Hindeley White, Esq.; seconded by William Grant, Esq.—

5. That the most cordial thanks of the meeting be given to the chairman and directors for their very great zeal and attention in conducting the affairs of the company.

Moved by Robert Oakes, Esq.; seconded by Charles Hindley, Esq., M.P., and supported by Rev. T. Timpon, John Fussell, Esq., and R. B. Beddome, Esq.—

6. That the best acknowledgments of this meeting are due to George Fife Angus, Esq., the chairman of the directors of this company during the past 12 years, for the intelligent, devoted, and valuable services of that gentleman; and that this resolution be transmitted to him by the chairman.

Moved by Edward Divett, Esq., M.P.; seconded by Charles Hindley, Esq., M.P.—

7. That the best thanks of the meeting be given to Mr. McLaren and Mr. Giles (colonial managers), for their valuable services in the company's affairs.

A vote of thanks to the chairman for his urbanity and good conduct in the chair, having been proposed by the Rev. Thomas Timpon, was carried by acclamation.

DAVID MCLAREN, Manager.

REVIVAL OF PASSENGER TRAFFIC ON TURNPIKE ROADS.—RESUSCITATION OF INNS, INNKEEPERS, and TURNPIKE TRUSTS.

PROSPECTUSES for raising a LOAN of FIVE THOUSAND POUNDS, in sums of £10 each, payable by instalments, in aid of the above national object, to be obtained by means of Sir JAMES C. ANDERSON'S PATENT STEAM-CARRIAGE FOR COMMON ROADS (now rendered thoroughly effective), for which interest, at the rate of 15 per cent. per annum, will be paid half-yearly, and both principal and interest amply secured by mortgage, and without the lenders incurring the justly-dreaded liabilities of joint-stock companies, will be forwarded free (on the receipt of a postage-stamp), on application to Mr. Herbert, solicitor, 8, Heathcote-street, Mecklenburgh-square, London.

* The line of road selected to commence running the carriages is from Hyde-park Corner to Hounslow, through Kensington, Hammersmith, Brentford, &c.

RIDER'S RAILWAY BRIDGE.—TO RAILWAY COMPANIES.—A PROSPECTUS of the above newly-invented IRON TRUSS RAILWAY BRIDGE will be FORWARDED, and CONTRACTS entered into, or LICENSES GRANTED for its ERECTION, on application to Mr. Moulton, Bradford, Wilts.

RAILWAY AND OTHER IMPORTANT RECORDS, EFFECTUALLY PROTECTED FROM DAMP AND VERMIN.

Extract from the Appendix to the Second Report of the Commissioners on the Fire Arts.

"In 1839, I superintended the construction of a house, of three stories, on the Lac d'Enghein. The foundation of the building is constantly in water, about 194 inches below the level of the ground floor. The entire horizontal surface of the external and internal walls was covered at the level of the internal ground floor with a layer of

SEYSEL ASPHALTE."

less than half an inch thick, over which coarse sand was spread. Since the above date, no trace of damp has shown itself round the walls of the lower story, which are, for the most part, painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 24 inches above the external surface of the soil, and only 194, at the utmost, above that of the sheet of water. The layer of asphalt having been broken and removed, for the purpose of inserting the sills of two doors, spots, indicating the presence of damp, have been since remarked at the base of the door-posts.

THE DIRECTORS of the SEYSEL ASPHALTE COMPANY have much pleasure in recommending to the notice of ENGINEERS and ARCHITECTS the application of the ASPHALTE of SEYSEL, as the only effectual mode of preventing damp in basement floors, and water from percolating through the ARCHES of a VIADUCT.

The arrangements of this company enable works of any extent to be executed with the greatest promptitude.

SEYSEL ASPHALTE DEPOT, STANGATE, LONDON.

ESTABLISHED 1838.

* This method has been adopted at the New Houses of Parliament.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, and ENGINEERS.

W. BROTHERTON AND CO.'S PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and finest pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; it is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS.

TUBES FOR STEAM, GAS, AND OTHER PURPOSES. ALL SORTS OF GAS FITTINGS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY.

42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETWICK, STAFFORDSHIRE. MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and are warranted not to open in the weld.

42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.

WORKS—SMETWICK, STAFFORDSHIRE.

LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

LAP-WELDED IRON TUBES.

W. H. RICHARDSON, Jun., and CO., MANUFACTURE every description of WROUGHT-IRON TUBES, for Locomotive and Marine Boilers, Gas, Steam, and other purposes. PATENT TUBE WORKS, DARLSTON, STAFFORDSHIRE.

TO ENGINEERS, RAILWAY AND STEAM-BOAT COMPAN